

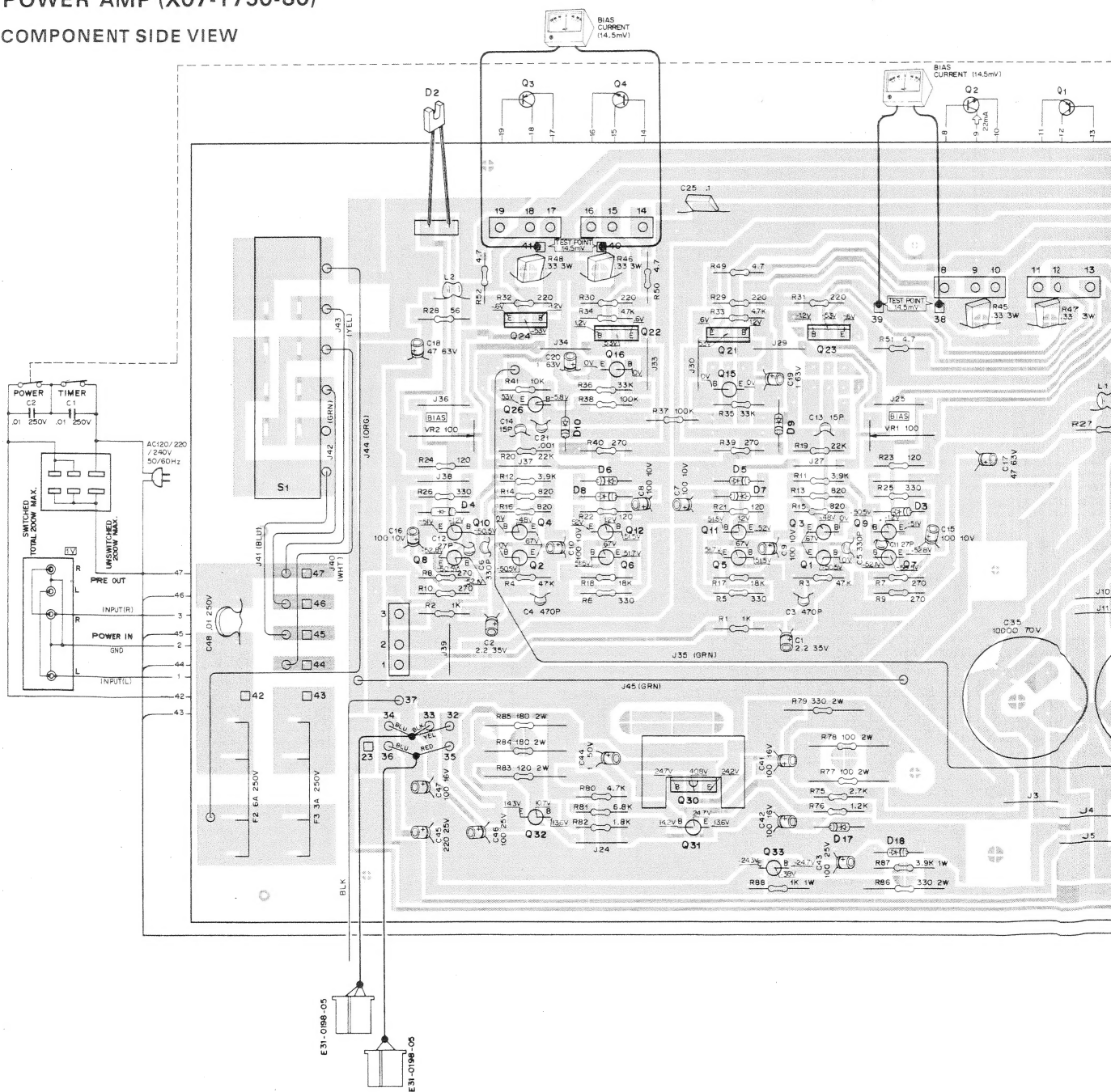
# MODEL NINE GX (KR-9000GX)

Model NINE GX circuit only is modified power amplifier from Model NINE G.  
This Service Manual documents a whole schematic, spec. PCB illustration and parts list.  
As for adjustment procedure, disassembly and other items, refer to the Model NINE G Service Manual.

## POWER AMP (X07-1750-80)

### COMPONENT SIDE VIEW

## PC BOARD



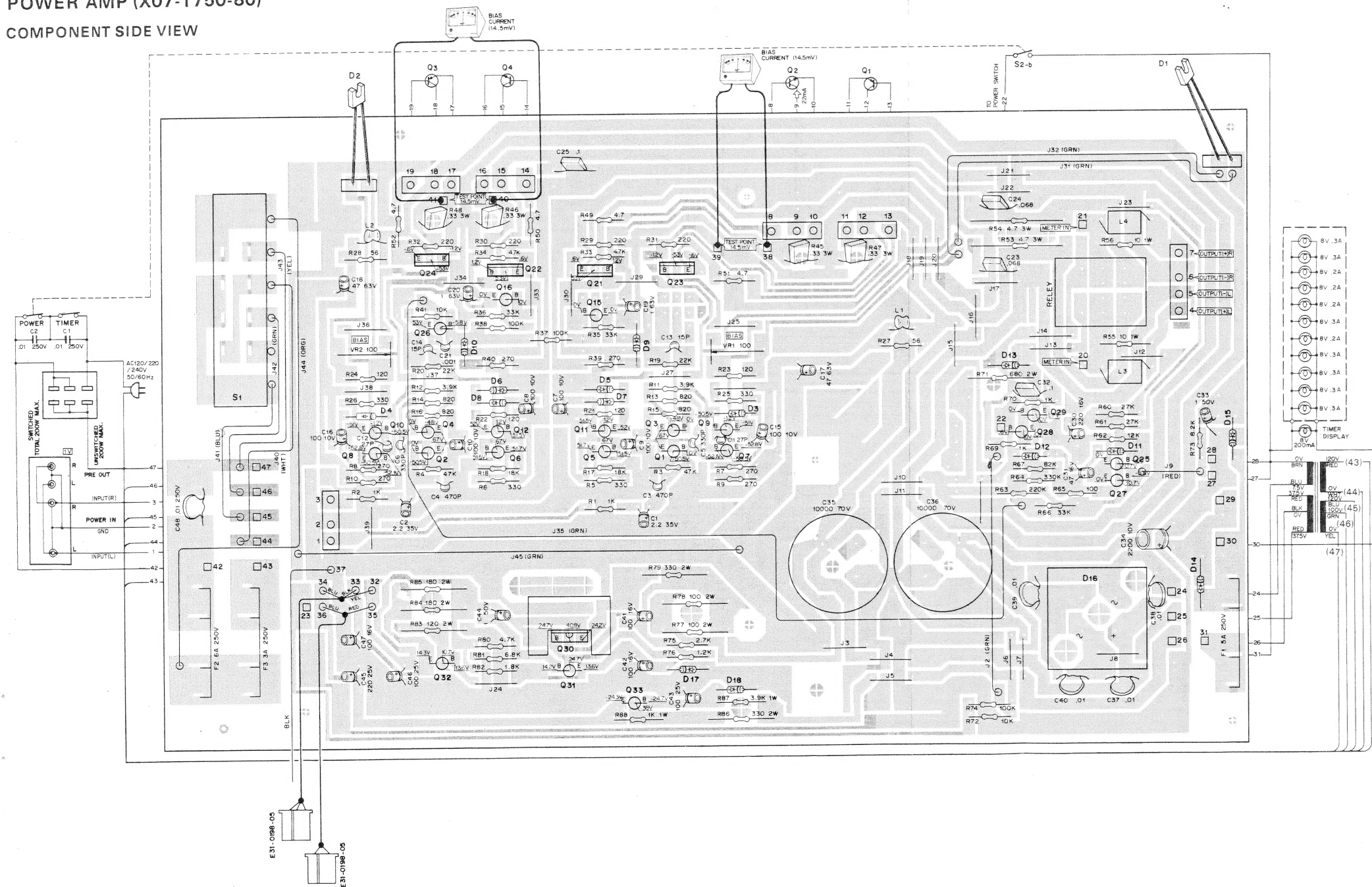
# MODEL NINE GX (KR-9000GX)

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## PC BOARD

### POWER AMP (X07-1750-80)

#### COMPONENT SIDE VIEW



## PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
<b>TOTAL</b>			
-	A20-1479-03	FRONT PANEL (9GX)	*
-	A20-1480-03	FRONT PANEL (9000GX)	*
-	A50-0069-03	SIDE PLATE L	
-	A50-0070-03	SIDE PLATE R	
-	B01-0121-04	PANEL ESCUTCHEON L	
-	B01-0122-04	PANEL ESCUTCHEON R	
-	B01-0123-03	PANEL ESCUTCHEON	
-	B04-0069-03	MESH PLATE	
-	B07-0230-14	ESCUTCHEON (SHAFT)	
-	B07-0234-03	ESCUTCHEON (LEVER SW)	
-	B07-0235-04	ESCUTCHEON (POWER)	
-	B07-0243-04	ESCUTCHEON (SPEAKER)	
-	B07-0244-03	ESCUTCHEON (SELECTOR)	
-	B07-0245-03	ESCUTCHEON (LOUD, METER)	
-	B07-0246-03	ESCUTCHEON (FIL, SUBSON)	
-	B08-0005-04	INDICATOR (SELECTOR)	
-	B08-2017-14	INDICATOR (TIMER)	
-	B08-3016-04	INDICATOR (SPEAKER)	
-	B10-0238-03	FRONT GLASS	
-	B20-0422-03	DIAL CALIBRATIONS	
-	B21-0023-14	DIAL POINTER	
-	B30-0077-05	LAMP X2	
-	B30-0157-05	LAMP ASSY	
-	B30-0158-05	LAMP (8V, 200MA)	
-	B30-0159-05	LED	
-	B31-0286-05	METER (T/S METER)	
-	B31-0287-05	METER (POWER)	
-	B46-0062-20	WARRANTY CARD	
-	B46-0063-00	WARRANTY CARD	
-	B50-3025-00	INSTRUCTION MANUAL (9GX)	*
-	B50-3026-00	INST. MANUAL (9000GX)	*
C1 , 2	C91-0023-05	CERAMIC 0.01UF AC250V	
C3 - 6	C52-1756-16	CERAMIC 560PF K	
-	D15-0171-13	DIAL PULLEY	
-	D15-0172-04	PULLEY X4	
-	D20-0142-03	DIAL SHAFT	
-	D21-0450-03	TIMER SHAFT	
-	D22-0033-04	COUPLING	
-	D32-0082-04	STOPPER (VOLTAGE SELEC)	
-	E03-0007-05	AC OUTLET	
-	E06-0501-05	DIN SOCKET	
-	E11-0060-15	PHONE JACK X2	
-	E13-0415-05	PHONO JACK (4P)	
-	E13-0609-05	PHONO JACK (6P)	
-	E14-0107-05	PHONO PLUG (SHORT)	
-	E29-0082-05	TERMINAL (ANT)	
-	E30-0545-05	POWER CORD (9GX)	
-	E30-0580-05	POWER CORD (9000GX)	
-	F01-0311-02	HEAT SINK	
-	G01-0045-24	DIAL SPRING	
-	G01-0360-04	COILED SPRING (SPEAKER)	
-	G01-0361-04	COILED SPRING (SELECTOR)	
-	H01-3041-04	CARTON BOX (9GX)	*
-	H01-3042-04	CARTON BOX (9000GX)	*
-	H10-1519-02	POLYSTYRENE FIXTURE	
-	J02-0104-04	FOOT	
-	J19-0524-14	LED HOLDER	

Ref. No. 参照番号	部
-	J4
-	J4
-	K2
-	K2
-	K2
-	K2
-	K2
-	K2
-	L0
-	N0
-	N0
-	N0
-	N0
S1	S3
S2	S5
-	T9
-	T9
-	V0
-	V0
-	V0
-	V0
-	X0
-	X0
-	X1
-	X1
-	X1
<b>POWER AM</b>	
C1 , 2	C2
C3 , 4	C5
C5 , 6	C5
C7 - 10	C2
C11 , 12	C7
C13 , 14	C7
C15 , 16	C2
C17 , 18	C2
C19 , 20	C2
C21	C5
C23 , 24	C4
C25	C4
C30	C2
C31	C2
C32	C4
C33	C2
C34	C2
C35 , 36	C5
C37 - 40	C5
C41 , 42	C2
C43	C2
C44	C2
C45	C2
C46	C2
C47	C2
C48	C5
F1	FC
F2	FC
F3	FC



## PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
<b>TOTAL</b>			
-	A20-1479-03	FRONT PANEL (9GX)	*
-	A20-1480-03	FRONT PANEL (9000GX)	*
-	A50-0069-03	SIDE PLATE L	
-	A50-0070-03	SIDE PLATE R	
-	B01-0121-04	PANEL ESCUTCHEON L	
-	B01-0122-04	PANEL ESCUTCHEON R	
-	B01-0123-03	PANEL ESCUTCHEON	
-	B04-0069-03	MESH PLATE	
-	B07-0230-14	ESCUTCHEON (SHAFT)	
-	B07-0234-03	ESCUTCHEON (LEVER SW)	
-	B07-0235-04	ESCUTCHEON (POWER)	
-	B07-0243-04	ESCUTCHEON (SPEAKER)	
-	B07-0244-03	ESCUTCHEON (SELECTOR)	
-	B07-0245-03	ESCUTCHEON (LOUD, METER)	
-	B07-0246-03	ESCUTCHEON (FIL, SUBSON)	
-	B08-0005-04	INDICATOR (SELECTOR)	
-	B08-2017-14	INDICATOR (TIMER)	
-	B08-3016-04	INDICATOR (SPEAKER)	
-	B10-0238-03	FRONT GLASS	
-	B20-0422-03	DIAL CALIBRATIONS	
-	B21-0023-14	DIAL POINTER	
-	B30-0077-05	LAMP X2	
-	B30-0157-05	LAMP ASSY	
-	B30-0158-05	LAMP (8V, 200MA)	
-	B30-0159-05	LED	
-	B31-0286-05	METER (T/S METER)	
-	B31-0287-05	METER (POWER)	
-	B46-0062-20	WARRANTY CARD	
-	B46-0063-00	WARRANTY CARD	
-	B50-3025-00	INSTRUCTION MANUAL (9GX)	
-	B50-3026-00	INST. MANUAL (9000GX)	
C1 ,2	C91-0023-05	CERAMIC 0.01UF AC250V	
C3 -6	C52-1756-16	CERAMIC 560PF K	
-	D15-0171-13	DIAL PULLEY	
-	D15-0172-04	PULLEY X4	
-	D20-0142-03	DIAL SHAFT	
-	D21-0450-03	TIMER SHAFT	
-	D22-0033-04	COUPLING	
-	D32-0082-04	STOPPER (VOLTAGE SELEC)	
-	E03-0007-05	AC OUTLET	
-	E06-0501-05	DIN SOCKET	
-	E11-0060-15	PHONE JACK X2	
-	E13-0415-05	PHONO JACK (4P)	
-	E13-0609-05	PHONO JACK (6P)	
-	E14-0107-05	PHONO PLUG (SHORT)	
-	E29-0082-05	TERMINAL (ANT)	
-	E30-0545-05	POWER CORD (9GX)	
-	E30-0580-05	POWER CORD (9000GX)	
-	F01-0311-02	HEAT SINK	
-	G01-0045-24	DIAL SPRING	
-	G01-0360-04	COILED SPRING (SPEAKER)	
-	G01-0361-04	COILED SPRING (SELECTOR)	
-	H01-3041-04	CARTON BOX (9GX)	*
-	H01-3042-04	CARTON BOX (9000GX)	*
-	H10-1519-02	POLYSTYRENE FIXTURE	
-	J02-0104-04	FOOT	
-	J19-0524-14	LED HOLDER	

## PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
-	J41-0033-05	BUSHING (9GX)	
-	J41-0034-05	BUSHING (9000GX)	
-	K23-0289-04	KNOB (TUNE)	
-	K23-0290-04	KNOB (VOL, BAL, NR MODE)	
-	K23-0291-04	KNOB (TONE)	
-	K23-0303-03	KNOB (MIC)	
-	K23-0307-03	KNOB (TIMER)	
-	K23-0308-04	KNOB (DOLBY CAL)	
-	K27-0070-04	KNOB (LEVER)	
-	K29-0299-04	KNOB (SPEAKER)	
-	K29-0300-04	KNOB X6	
-	L01-1606-15	POWER TRANSFORMER	
-	N08-0127-05	DRESSED SCREW	
-	N08-0128-35	GND SCREW	
-	N09-0293-05	PULLEY SCREW X4	
S1	S33-4014-05	LEVER SWITCH (POWER)	
S2	S59-1041-05	SWITCH (TIMER)	
-	T90-0083-05	ANTENNA (AM)	
-	T90-0202-05	ANTENNA (FM)	
Q1	V01-1105-40	2SA1105F(Y)	
Q2	V03-2580-40	2SC2580F(Y)	
Q3	V01-1105-40	2SA1105F(Y)	
Q4	V03-2580-40	2SC2580F(Y)	
-	X05-1570-80	TUNER PCB ASSY	*
-	X07-1750-80	POWER AMP PCB ASSY	
-	X11-1510-80	TONE AMP PCB ASSY	
-	X13-2550-80	SPEAKER SELECT PCB ASSY	
-	X14-1110-80	DOLBY PCB ASSY	
<b>POWER AMP PCB ASS'Y (X07-1750-80)</b>			
C1 ,2	C25-6522-57	LL-ELEC 2.2UF 35WV	
C3 ,4	C52-1747-16	CERAMIC 470PF K	
C5 ,6	C52-1733-16	CERAMIC 330PF K	
C7 -10	C24-1010-71	ELECTRO 100UF 10WV	
C11 ,12	C71-1727-05	CERAMIC 27PF J	
C13 ,14	C71-1715-05	CERAMIC 15PF J	
C15 ,16	C24-1010-71	ELECTRO 100UF 10WV	
C17 ,18	C24-1847-61	ELECTRO 47UF 63WV	
C19 ,20	C24-1810-51	ELECTRO 1UF 63WV	
C21	C52-1710-27	CERAMIC 0.001UF M	
C23 ,24	C46-1768-36	MYLAR 0.068UF K	
C25	C46-2010-47	MYLAR 0.1UF M	
C30	C24-1222-71	ELECTRO 220UF 16WV	
C31	C25-1247-67	LL-ELEC 47UF 16WV	
C32	C46-1710-47	MYLAR 0.1UF M	
C33	C24-1710-51	ELECTRO 1UF 50WV	
C34	C24-1022-81	ELECTRO 2200UF 10WV	
C35 ,36	C90-0413-05	ELECTRO 10000UF 70SV	
C37 -40	C54-2710-39	CERAMIC 0.01UF P	
C41 ,42	C24-1210-71	ELECTRO 100UF 16WV	
C43	C24-1410-71	ELECTRO 100UF 25WV	
C44	C24-1710-51	ELECTRO 1UF 50WV	
C45	C24-1422-71	ELECTRO 220UF 25WV	
C46	C24-1410-71	ELECTRO 100UF 25WV	
C47	C24-1210-71	ELECTRO 100UF 16WV	
C48	C91-0023-05	CERAMIC 0.01UF 250WV	
F1	F05-5022-05	FUSE (5A)	
F2	F05-6021-05	FUSE (6A)	
F3	F05-3022-05	FUSE (3A)	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
-	J13-0041-05	FUSE HOLDER X6	
L1 ,2	L40-1021-03	INDUCTOR	
L3 ,4	L39-0080-15	COIL	
R21 ,22	R43-1212-15	FL-PROOF RD120 J 2E	
R25 ,26	R43-1233-15	FL-PROOF RD330 J 2E	
R27 ,28	R43-1256-05	FL-PROOF RD56 J 2E	
R29 -32	R43-1222-15	FL-PROOF RD220 J 2E	
R39 ,40	R43-1227-15	FL-PROOF RD270 J 2E	
R45 -48	R92-0113-05	CEMENT 0.33 K 3F	
R49 -52	R43-1247-95	FL-PROOF RD4.7 J 2E	
R53 ,54	R47-5647-95	FL-PROOF RS4.7 J 3F	
R55 ,56	R47-5410-05	FL-PROOF RS10 J 3A	
R71	R47-5568-15	FL-PROOF RS680 J 3D	
R77 ,78	R47-5510-15	FL-PROOF RS100 J 3D	
R79	R47-5533-15	FL-PROOF RS330 J 3D	
R83	R47-5512-15	FL-PROOF RS120 J 3D	
R84 ,85	R47-5518-15	FL-PROOF RS180 J 3D	
R86	R47-5533-15	FL-PROOF RS330 J 3D	
R87	R47-5439-25	FL-PROOF RS3.9K J 3A	
R88	R47-5410-25	FL-PROOF RS1K J 3A	
VR1 ,2	R12-0052-05	TRIMMING POT 100 BIAS	
RL1	S51-2038-05	RELAY	
S1	S31-2046-05	SLIDE SWITCH (VOLTAGE)	
D1 ,2	V11-5100-10	STV-4H(W)	
D3 -8	V11-0271-05	1S2076	
D9 ,10	V11-0273-05	1S2076A	
D11 ,12	V11-0271-05	1S2076	
D13 ,14	V11-0295-05	W06B	
D15	V11-0271-05	1S2076	
D16	V11-2101-40	M4C-51-12*1	
D17	V11-4102-30	XZ-132	
D18	V11-0287-05	WZ-240	
Q1 -4	V01-0921-10	2SA921(S), 2SA872(E)	
Q5 ,6	V01-0198-05	2SA872, 2SA872A	
Q7 ,8	V03-1775-06	2SC1775(E) 2SC1775A(E)	
Q9 ,10	V03-0451-05	2SC1885(Q, R)	
Q11 ,12	V01-0912-20	2SA912(Q, R)	
Q15 ,16	V03-1845-10	2SC1845(F, E)	
Q21 ,22	V03-0468-05	2SC1913(Q, R)	
Q23 ,24	V01-0188-05	2SA913(Q, R)	
Q25	V03-0270-05	2SC945(R, Q), 2SD767	
Q26	V01-1023-10	2SA1023(R, Q), 2SB725(Q, R)	
Q27	V03-0270-05	2SC945(R, Q), 2SD767	
Q28	V03-2378-10	2SC2378(R, Q), 2SD767	
Q29	V01-0954-10	2SA954(L, K), 2SA984K(E, F)	
Q30	V04-0762-00	2SD762, 2SD330	
Q31	V03-0270-05	2SC945(R, Q), 2SD767	
Q32 ,33	V01-0173-05	2SA850, 2SA777(Q, R)	

## MODEL NINE GX

## MODEL NINE GX

## PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
-	A20-1479-03	FRONT PANEL (9GX)	*
-	A20-1480-03	FRONT PANEL (9000GX)	*
-	A50-0069-03	SIDE PLATE L	
-	A50-0070-03	SIDE PLATE R	
C1 ,2	C25-6522-57	LL-ELEC 2.2UF 35WV	
C3 ,4	C52-1747-16	CERAMIC 470PF K	
C5 ,6	C52-1733-16	CERAMIC 330PF K	
C7 -10	C24-1010-71	ELECTRO 100UF 10WV	
C11 ,12	C71-1727-05	CERAMIC 27PF J	
C13 ,14	C71-1715-05	CERAMIC 15PF J	
C15 ,16	C24-1010-71	ELECTRO 100UF 10WV	
C17 ,18	C24-1847-61	ELECTRO 47UF 63WV	
C19 ,20	C24-1810-51	ELECTRO 1UF 63WV	
C21	C52-1710-27	CERAMIC 0.001UF M	

- ① Symbol of new parts  
② Parts list of Model NINE GX and KR-9000GX was included in this manual.  
In column of parts list, 9GX means model NINE GX (U, M type), 9000GX does KR-9000GX (H type).  
Part list of TUNER, TONE, SPEAKER SELECT and DOLBY PCB ass'y is not written, refer to the MODEL 9GX service manual.  
(Parts No. B51-0538-00)  
③ Reference No. in schematic diagram.  
④ Abbreviation of "ceramic capacitor".  
All capacitors and resistors are listed using abbreviations.  
⑤ Abbreviations  
\* Abbreviations of capacitors (Parts No. with initial letter "C").  
ELECTRO..... Electrolytic capacitor  
LL-ELEC..... Low leak electrolytic capacitor  
NP-ELEC..... Non-pole electrolytic capacitor  
MICA..... Mica capacitor  
POLYSTY..... Polystyrene capacitor  
MYLAR..... Mylar capacitor  
CERAMIC..... Ceramic capacitor  
TANTAL..... Tantalum capacitor  
MF..... Metallized film capacitor  
OIL..... Oil capacitor  
The unit "UF" is used in lieu of "μF".  
\* Abbreviations of resistors (Parts No. with initial letters "R").  
RC..... Carbon composition resistor  
RD..... Carbon film resistor  
FL-PROOF RD..... Flame-proof carbon film resistor  
RW..... Wire wound power resistor  
FL-PROOF RS..... Flame-proof metal oxide film resistor  
RN..... Metal film resistor  
2B..... Rated wattage 1/8W  
2E..... Rated wattage 1/4W  
2H..... Rated wattage 1/2W  
3A..... Rated wattage 1W  
3D..... Rated wattage 2W  
3F..... Rated wattage 3W  
3G..... Rated wattage 4W  
3H..... Rated wattage 5W  
All resistor values are indicated with the unit (Ω) omitted.  
\* Abbreviations common to capacitors and resistors.  
C..... ±0.25pF (Used for capacitors only)  
D..... ±0.5pF (Used for capacitors only)  
F..... ±1%  
G..... ±2%  
J..... ±5%  
K..... ±10%  
M..... ±20%  
Z..... +80%, -20% (Used for capacitors only)  
P..... +100%, -0% (Used for capacitors only)  
⑥ Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

TRIO

KENWOOD ELE  
1315 E. Watson  
75 Seaview Drive  
TRIO-KENWOOD  
Lauvensesteenwe  
TRIO-KENWOOD  
Ridolf-Braas-Str.  
TRIO-KENWOOD  
5 Boulevard Ney  
TRIO-KENWOOD  
Kemi Slagen 10A  
TRIO-KENWOOD  
30 Whiting St., Ar  
KENWOOD & LI  
Rior 501, Wang

# MODEL NINE GX

# MODEL NINE GX

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-	J41-0034-05	BUSHING (9000GX)	
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-	K23-0290-04	KNOB (VOL, BAL, NR MODE)	
-	K23-0291-04	KNOB (TONE)	
-	K23-0303-03	KNOB (MIC)	
-	K23-0307-03	KNOB (TIMER)	
-	K23-0308-04	KNOB (DOLBY CAL)	
-	K27-0070-04	KNOB (LEVER)	
-	K29-0299-04	KNOB (SPEAKER)	
-	K29-0300-04	KNOB X6	
-	L01-1606-15	POWER TRANSFORMER	
-	N08-0127-05	DRESSED SCREW	
-	N08-0128-35	GND SCREW	
-	N09-0293-05	PULLEY SCREW X4	
S1	S33-4014-05	LEVER SWITCH (POWER)	
S2	S59-1041-05	SWITCH (TIMER)	
-	T90-0083-05	ANTENNA (AM)	
-	T90-0202-05	ANTENNA (FM)	
Q1	V01-1105-40	2SA1105F(Y)	
Q2	V03-2580-40	2SC2580F(Y)	
Q3	V01-1105-40	2SA1105F(Y)	
Q4	V03-2580-40	2SC2580F(Y)	
-	X05-1570-80	TUNER PCB ASSY	
-	X07-1750-80	POWER AMP PCB ASSY	*
-	X11-1510-80	TONE AMP PCB ASSY	
-	X13-2550-80	SPEAKER SELECT PCB ASSY	
-	X14-1110-80	DOLBY PCB ASSY	
<b>POWER AMP PCB ASS'Y (X07-1750-80)</b>			
C1 ,2	C25-6522-57	LL-ELEC 2.2UF 35WV	
C3 ,4	C52-1747-16	CERAMIC 470PF K	
C5 ,6	C52-1733-16	CERAMIC 330PF K	
C7 -10	C24-1010-71	ELECTRO 100UF 10WV	
C11 ,12	C71-1727-05	CERAMIC 27PF J	
C13 ,14	C71-1715-05	CERAMIC 15PF J	
C15 ,16	C24-1010-71	ELECTRO 100UF 10WV	
C17 ,18	C24-1847-61	ELECTRO 47UF 63WV	
C19 ,20	C24-1810-51	ELECTRO 1UF 63WV	
C21	C52-1710-27	CERAMIC 0.001UF M	
C23 ,24	C46-1768-36	MYLAR 0.068UF K	
C25	C46-2010-47	MYLAR 0.1UF M	
C30	C24-1222-71	ELECTRO 220UF 16WV	
C31	C25-1247-67	LL-ELEC 47UF 16WV	
C32	C46-1710-47	MYLAR 0.1UF M	
C33	C24-1710-51	ELECTRO 1UF 50WV	
C34	C24-1022-81	ELECTRO 2200UF 10WV	
C35 ,36	C90-0413-05	ELECTRO 10000UF 70SV	
C37 -40	C54-2710-39	CERAMIC 0.01UF P	
C41 ,42	C24-1210-71	ELECTRO 100UF 16WV	
C43	C24-1410-71	ELECTRO 100UF 25WV	
C44	C24-1710-51	ELECTRO 1UF 50WV	
C45	C24-1422-71	ELECTRO 220UF 25WV	
C46	C24-1410-71	ELECTRO 100UF 25WV	
C47	C24-1210-71	ELECTRO 100UF 16WV	
C48	C91-0023-05	CERAMIC 0.01UF 250WV	
F1	F05-5022-05	FUSE (5A)	
F2	F05-6021-05	FUSE (6A)	
F3	F05-3022-05	FUSE (3A)	

## PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
-	A20-1479-03	FRONT PANEL (9GX)	*
-	A20-1480-03	FRONT PANEL (9000GX)	*
-	A50-0069-03	SIDE PLATE L	
-	A50-0070-03	SIDE PLATE R	
C1 ,2	C25-6522-57	LL-ELEC 2.2UF 35WV	
C3 ,4	C52-1747-16	CERAMIC 470PF K	
C5 ,6	C52-1733-16	CERAMIC 330PF K	
C7 -10	C24-1010-71	ELECTRO 100UF 10WV	
C11 ,12	C71-1727-05	CERAMIC 27PF J	
C13 ,14	C71-1715-05	CERAMIC 15PF J	
C15 ,16	C24-1010-71	ELECTRO 100UF 10WV	
C17 ,18	C24-1847-61	ELECTRO 47UF 63WV	
C19 ,20	C24-1810-51	ELECTRO 1UF 63WV	
C21	C52-1710-27	CERAMIC 0.001UF M	

- ① Symbol of new parts  
② Parts list of Model NINE GX and KR-9000GX was included in this manual.

In column of parts list, 9GX means model NINE GX (U, M type), 9000GX does KR-9000GX (H type).  
Part list of TUNER, TONE, SPEAKER SELECT and DOLBY PCB ass'y is not written, refer to the MODEL 9GX service manual.  
(Parts No. B51-0538-00)

- ③ Reference No. in schematic diagram.  
④ Abbreviation of "ceramic capacitor".  
All capacitors and resistors are listed using abbreviations.

- ⑤ Abbreviations  
\* Abbreviations of capacitors (Parts No. with initial letter "C").  
ELECTRO..... Electrolytic capacitor  
LL-ELEC..... Low leak electrolytic capacitor  
NP-ELEC..... Non-pole electrolytic capacitor  
MICA..... Mica capacitor  
POLYSTY..... Polystyrene capacitor  
MYLAR..... Mylar capacitor  
CERAMIC..... Ceramic capacitor  
TANTAL..... Tantalum capacitor  
MF..... Metallized film capacitor  
OIL..... Oil capacitor  
The unit "UF" is used in lieu of "μF".

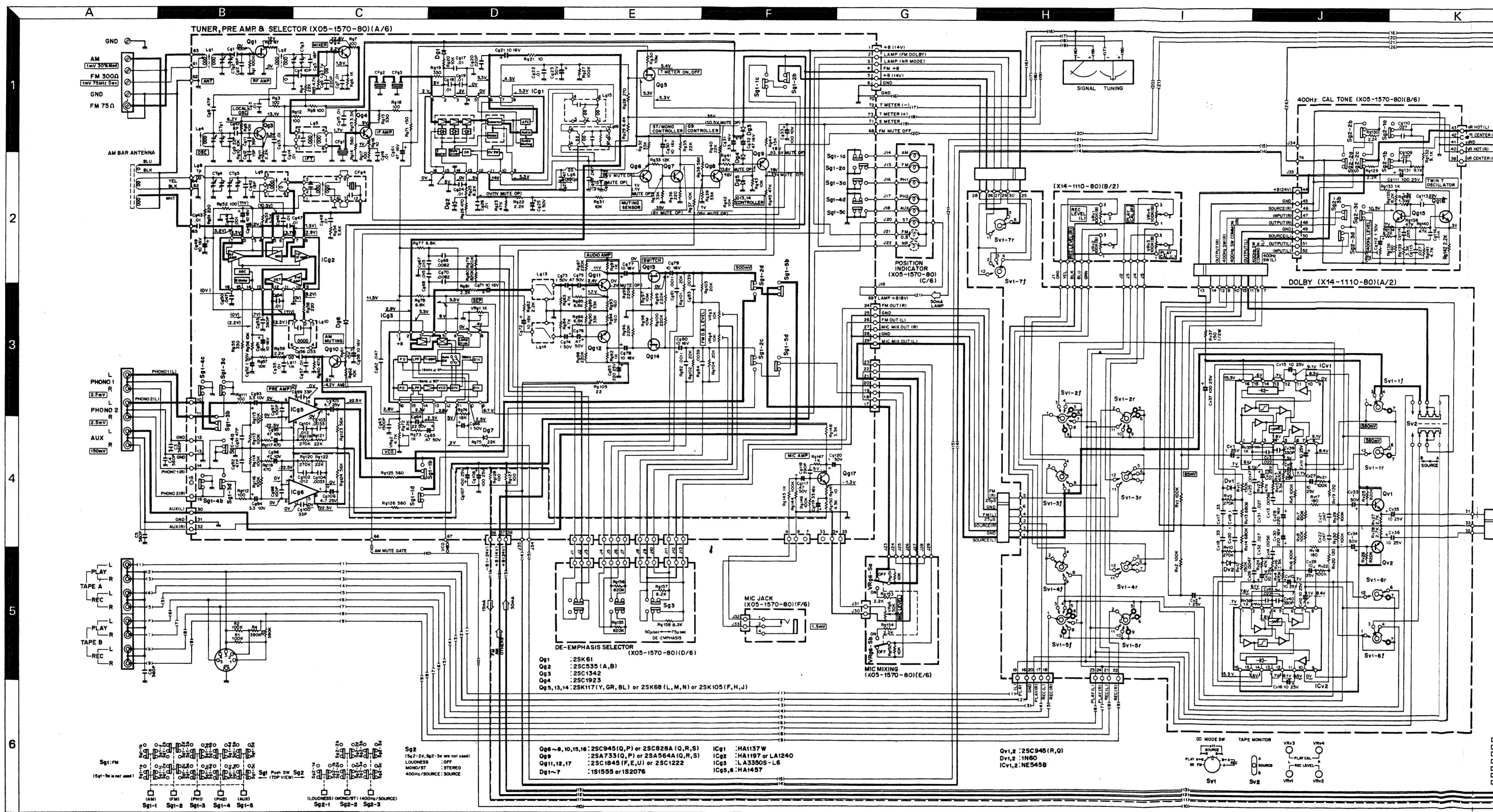
- \* Abbreviations of resistors (Parts No. with initial letters "R").  
RC..... Carbon composition resistor  
RD..... Carbon film resistor  
FL-PROOF RD..... Flame-proof carbon film resistor  
RW..... Wire wound power resistor  
FL-PROOF RS..... Flame-proof metal oxide film resistor  
RN..... Metal film resistor  
2B..... Rated wattage 1/8W  
2E..... Rated wattage 1/4W  
2H..... Rated wattage 1/2W  
3A..... Rated wattage 1W  
3D..... Rated wattage 2W  
3F..... Rated wattage 3W  
3G..... Rated wattage 4W  
3H..... Rated wattage 5W  
All resistor values are indicated with the unit (Ω) omitted.

- \* Abbreviations common to capacitors and resistors.  
C..... ±0.25pF (Used for capacitors only)  
D..... ±0.5pF (Used for capacitors only)  
F..... ±1%  
G..... ±2%  
J..... ±5%  
K..... ±10%  
M..... ±20%  
Z..... +80% - 20% (Used for capacitors only)  
P..... +100% - 0% (Used for capacitors only)  
⑥ Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

A product of  
**TRIO-KENWOOD CORPORATION**  
6-17, 3-chome, Aobadai, Meguro-ku, Tokyo 153, Japan

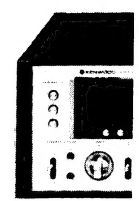
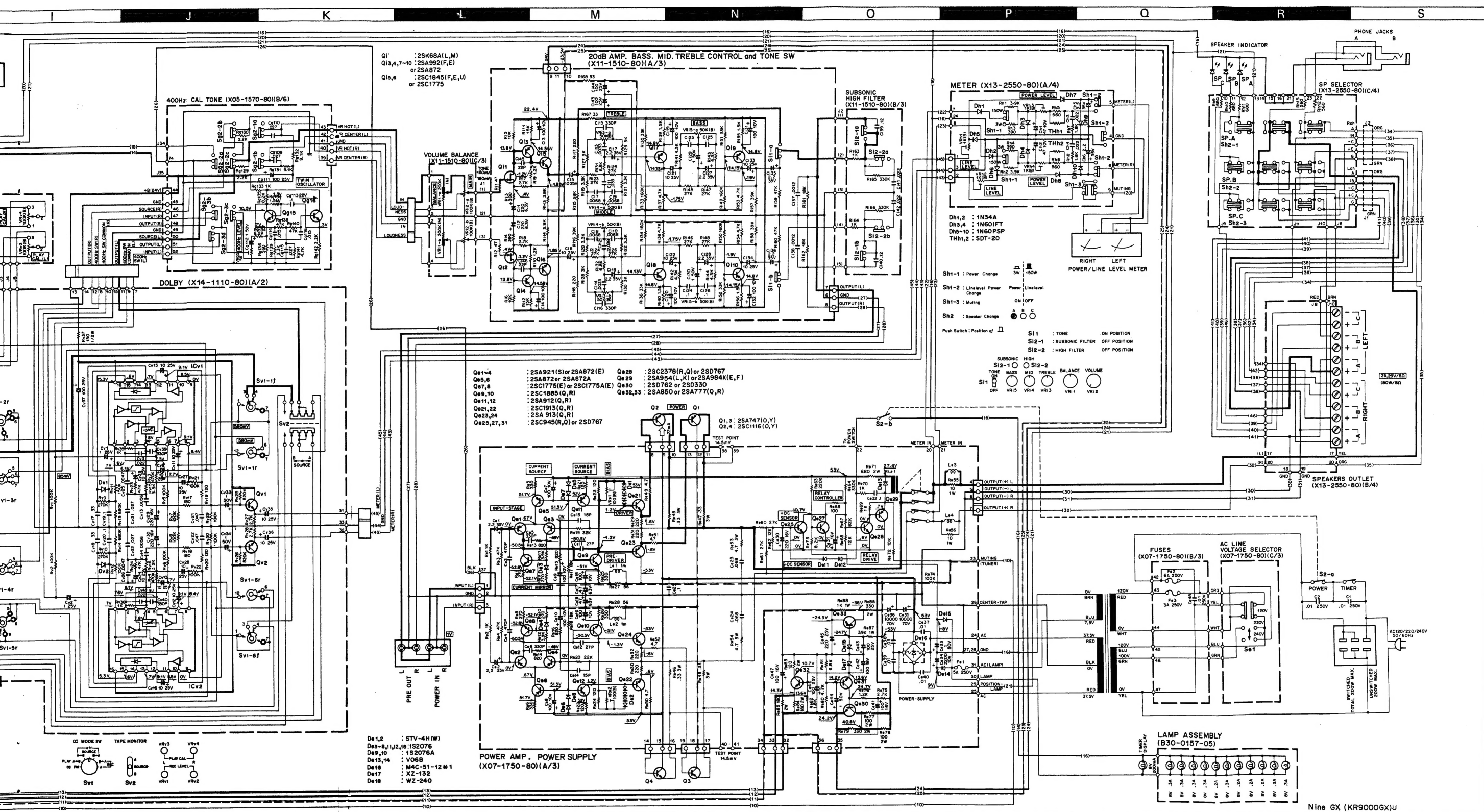
**KENWOOD ELECTRONICS, INC.**  
1315 E. Watsoncenter Rd, Carson, California 90745  
75 Seaview Drive, Secaucus, New Jersey 07094, U.S.A.  
**TRIO-KENWOOD ELECTRONICS, N.V.**  
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**TRIO-KENWOOD ELECTRONICS GmbH**  
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**TRIO-KENWOOD (AUSTRALIA) PTY. LTD.**  
30 Whiting St., Artarmon, N.S.W. 2064, Australia  
**KENWOOD & LEE ELECTRONICS, LTD.**  
Room 501, Wang Kee Building, 5th Floor, 34-37, Connaught Road, Central, Hong Kong





# AM-FM STEREO RECEIVER

(KR-9000GX) **MODEL I**



**POWER**  
Power Out  
80 watt  
channels  
Hz with  
distortion

Both Chann  
Dynamic Pc  
Total Harm

Intermodu  
(60 Hz : 7 k

Power Band  
Frequency I  
Signal to N  
Damping Fa  
Input Sensi  
Speaker Im

**PRE AM**  
Input Sensi  
Phono 1  
Phono 2  
AUX  
Tape A, B  
Mic  
Maximum I

Frequency I  
Phono

AUX and  
Tone Contr  
Bass  
Mid  
Treble  
Loudness C  
Subsonic  
Output Level  
Tape H/F

Pre Out

**FM TUN**  
Usable Sw  
50 dB Qui  
Mono  
Stereo  
Signal to P  
Mono  
Stereo  
Total Harm  
Mono  
Stereo  
Frequency

Capture Re  
Alternates C  
Spurious R  
Image Reas  
IF Respons  
AM Suppre  
85 dB  
Stereo Sep

Sub Carrier  
Antenna Inr

**FM Frequ**  
AM TUN  
Usable Sen  
Signal to N  
Image Repe  
Selectivity  
IF Rejection  
Total Harm

**GENERA**  
Power Req

Power Con  
A.C. Outlet  
Dimension

Weight  
(Gr

**NOTE:**  
Kenwood fo  
ment. For  
notice

Power Req

Power Con

A.C. Outlet

Dimension

Weight

(Gr

NOTE:

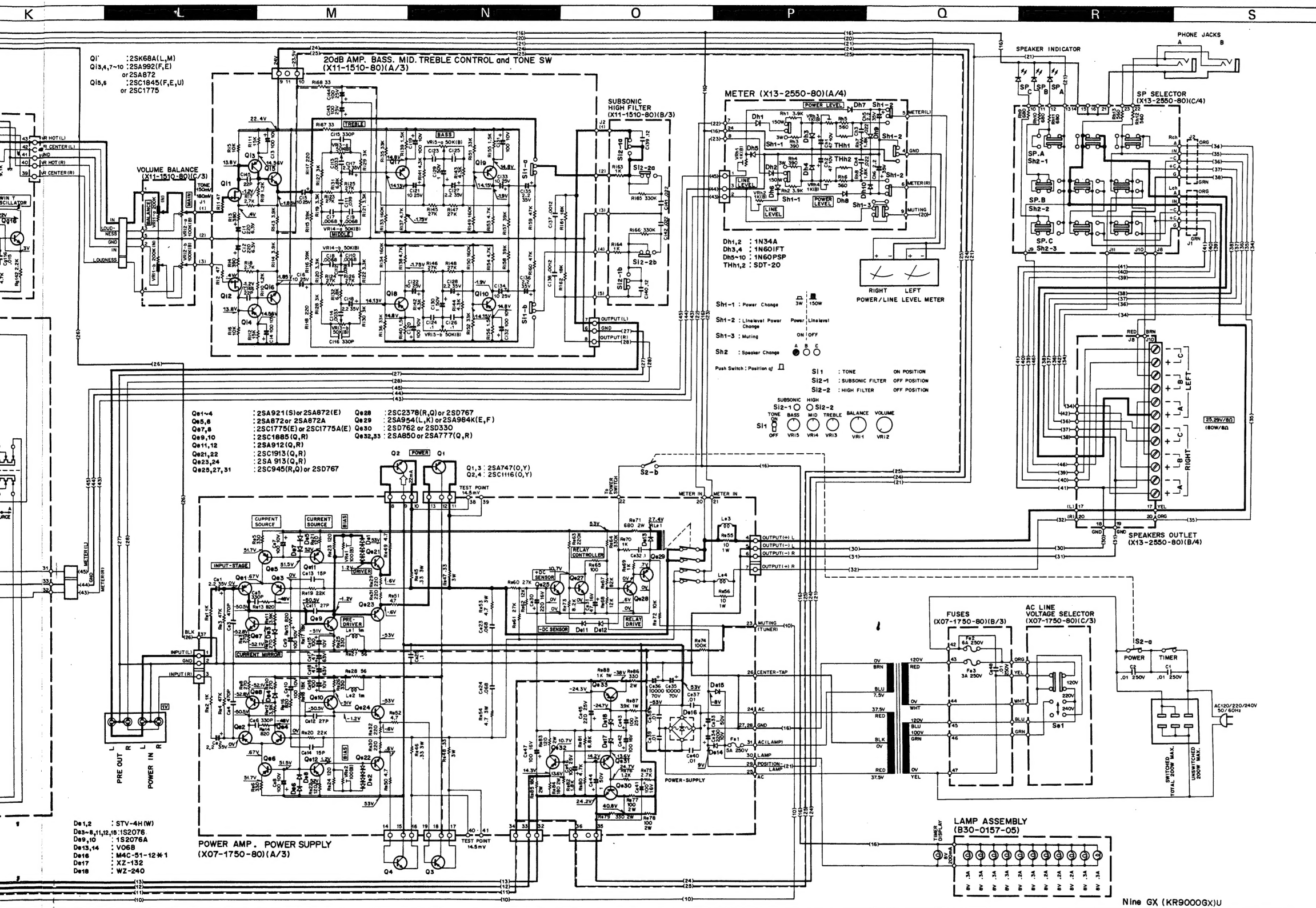
Kenwood fo

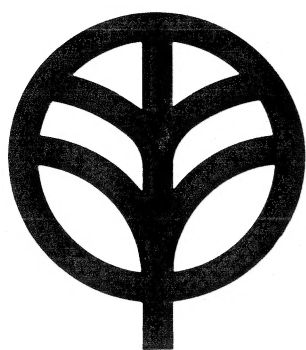
ment. For

notice



# MODEL NINE GX

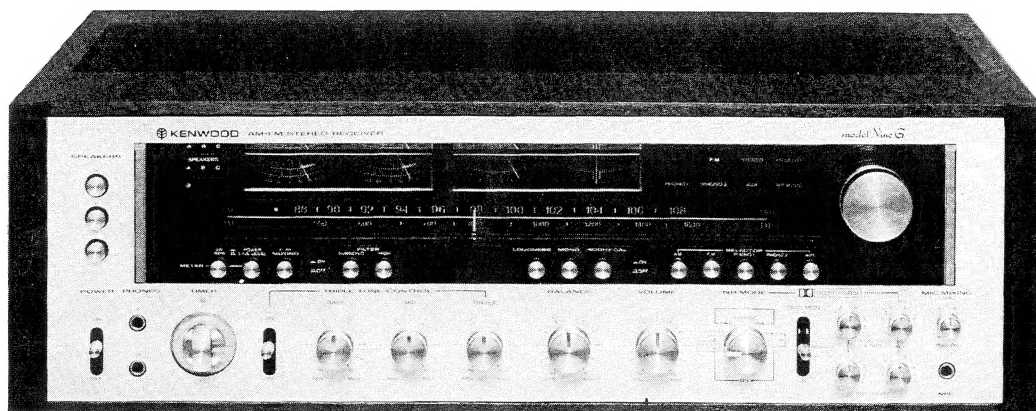




**KENWOOD**  
HI/FI STEREO COMPONENTS

# SERVICE MANUAL

**MODEL NINE G  
(KR-9000G)**



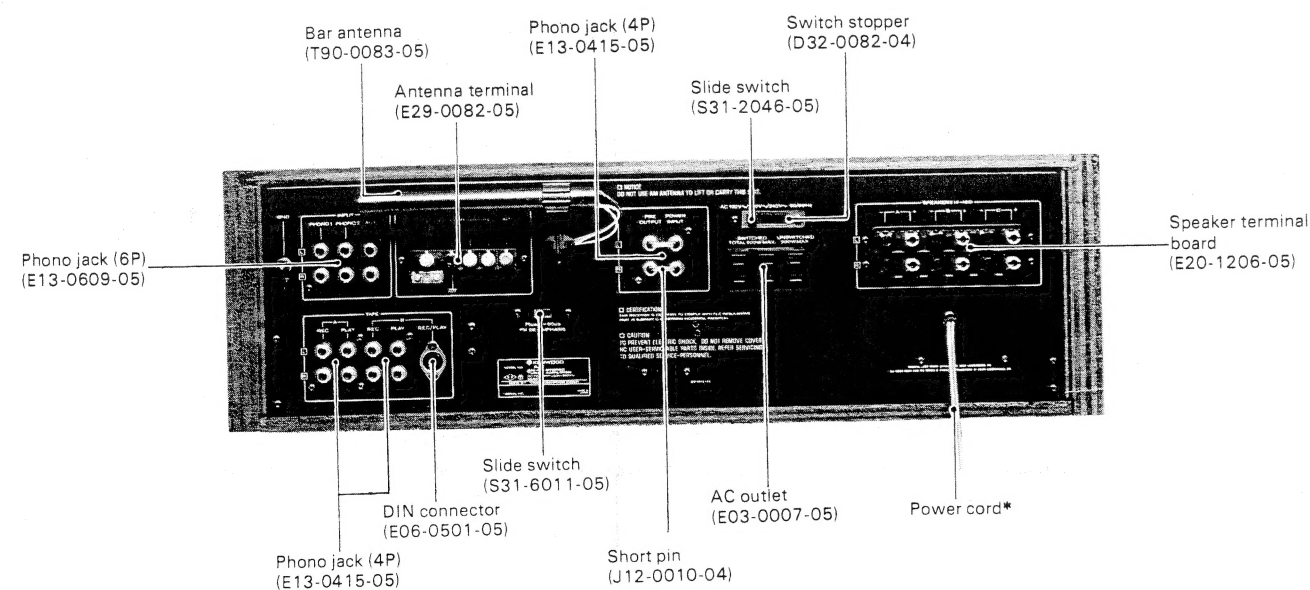
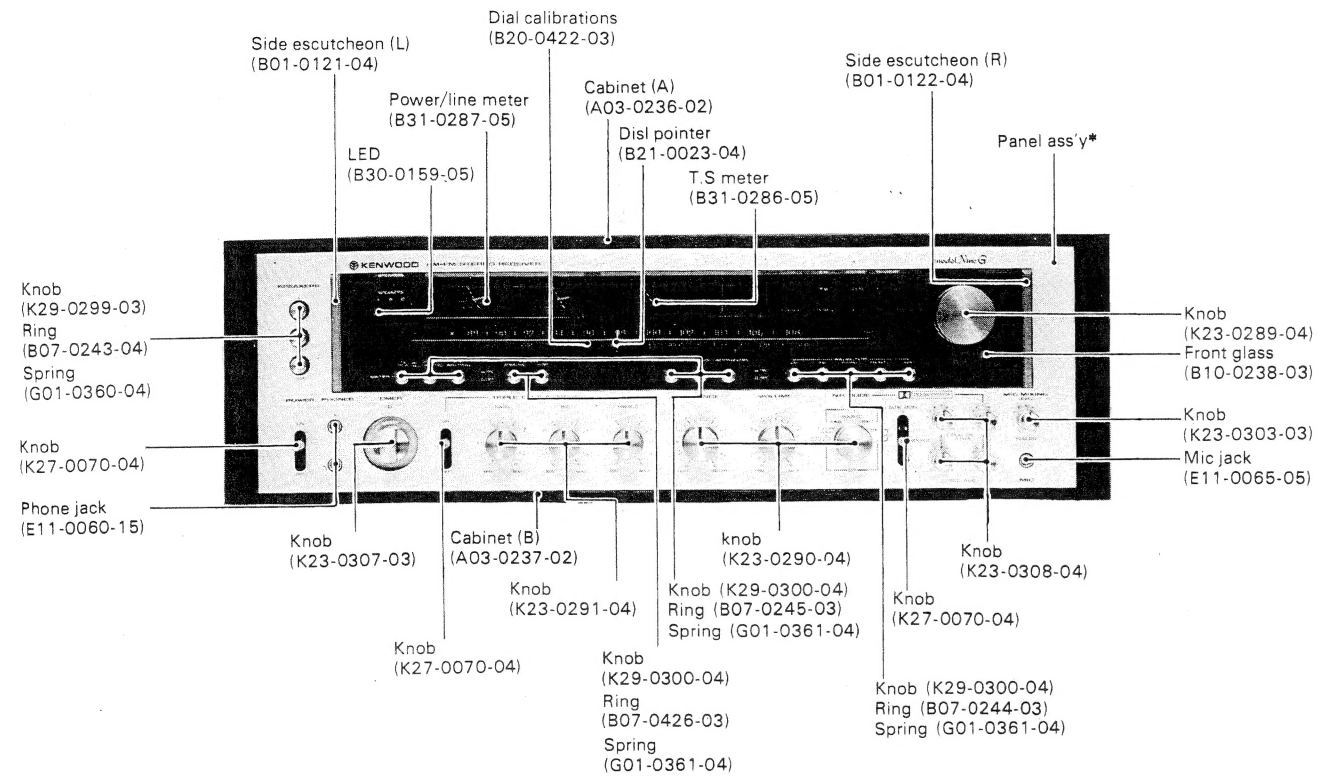
**AM-FM STEREO RECEIVER**



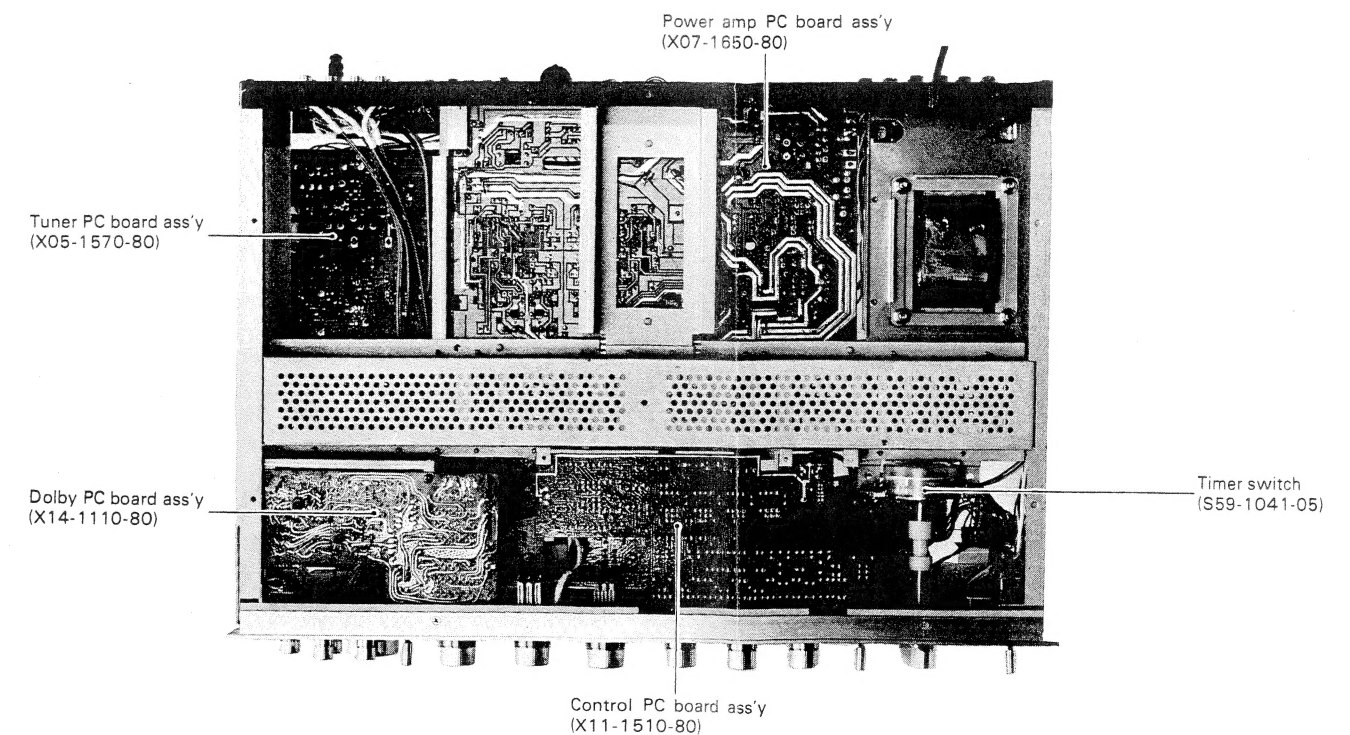
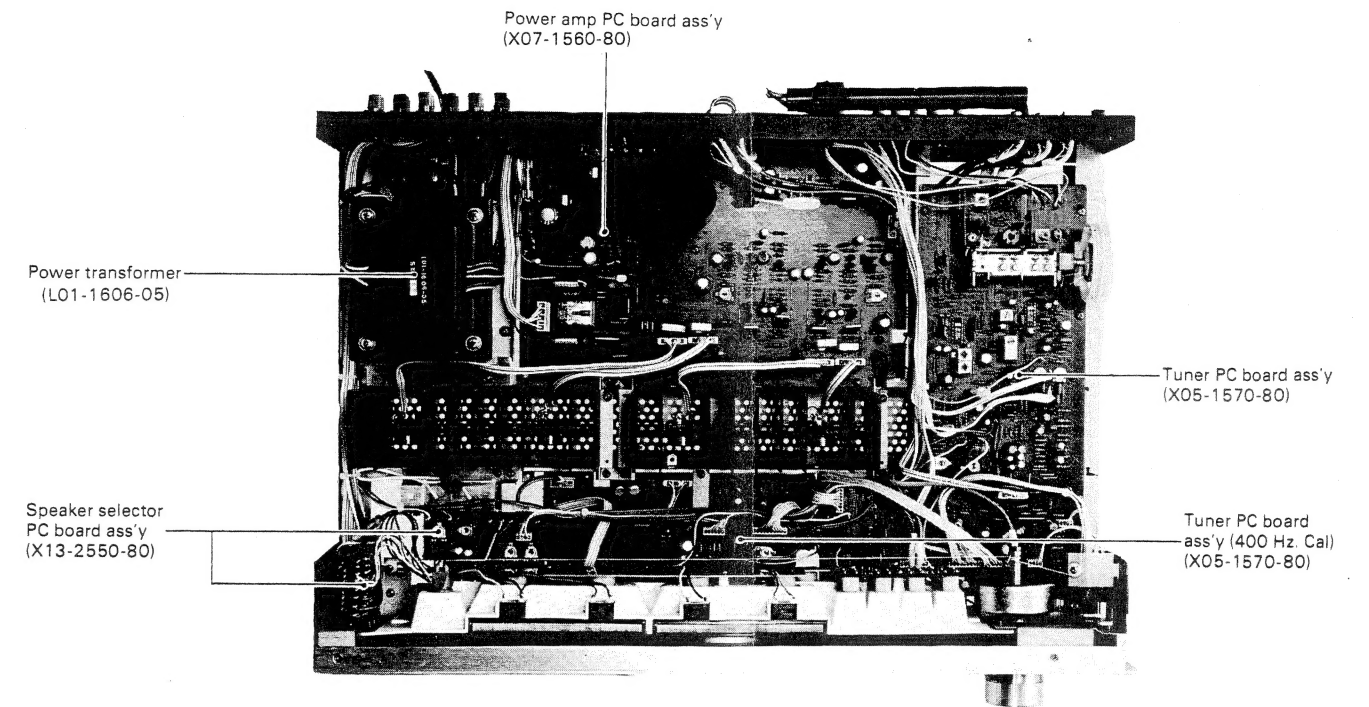
## CONTENTS

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DISASSEMBLY FOR REPAIR .....	4
DIAL CORD STRINGING .....	5
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ADJUSTMENT.....	6
PC BOARD .....	8
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## EXTERNAL VIEW



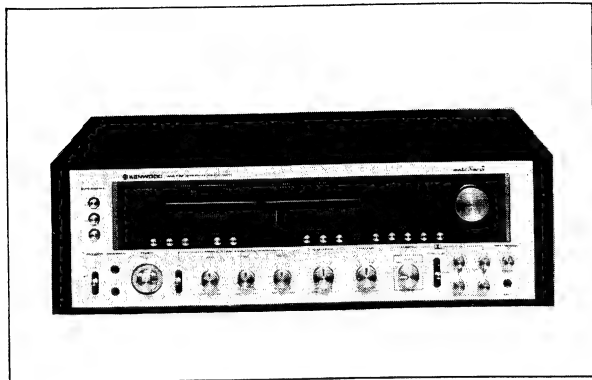
## INTERNAL VIEW



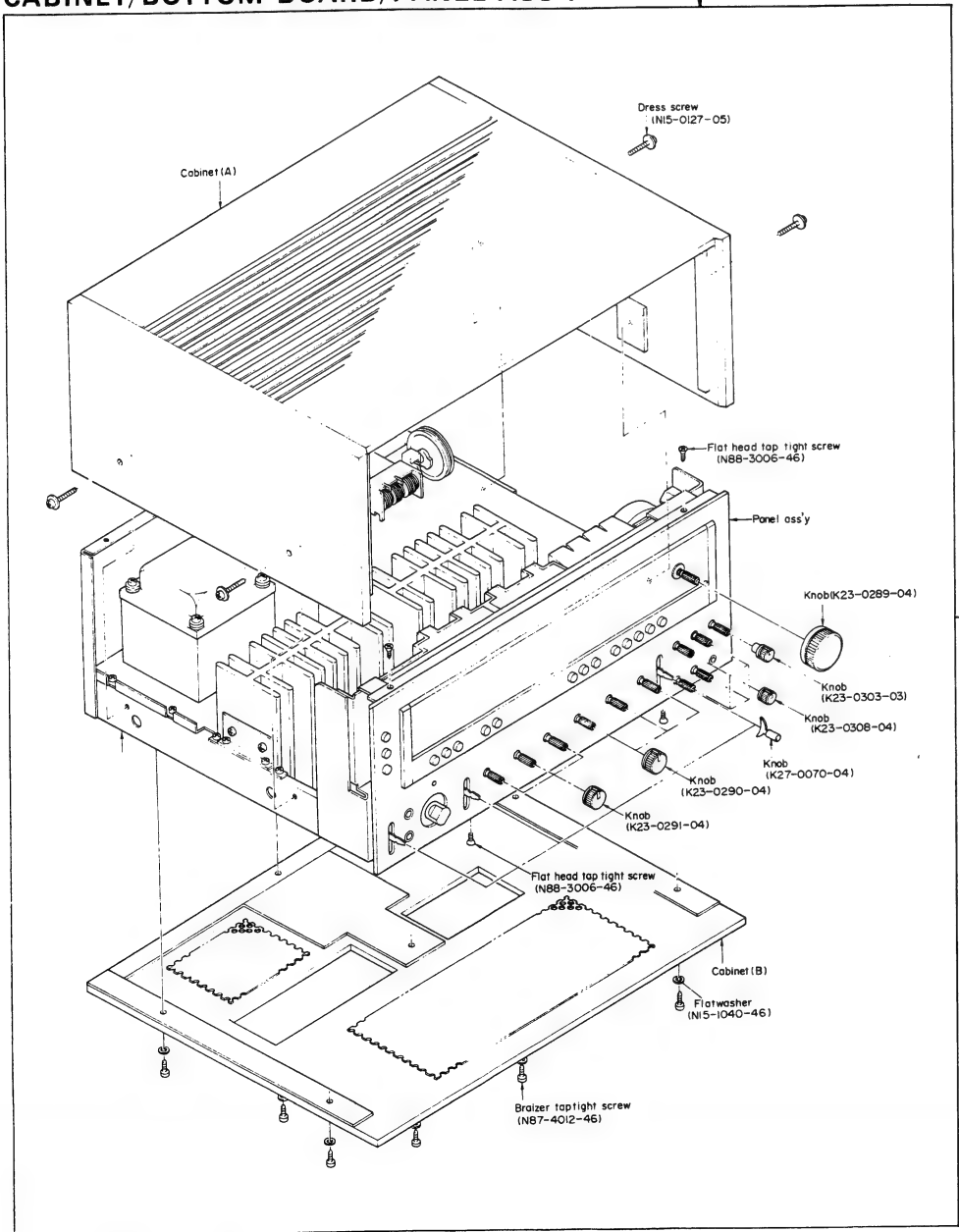


MODEL NINE G

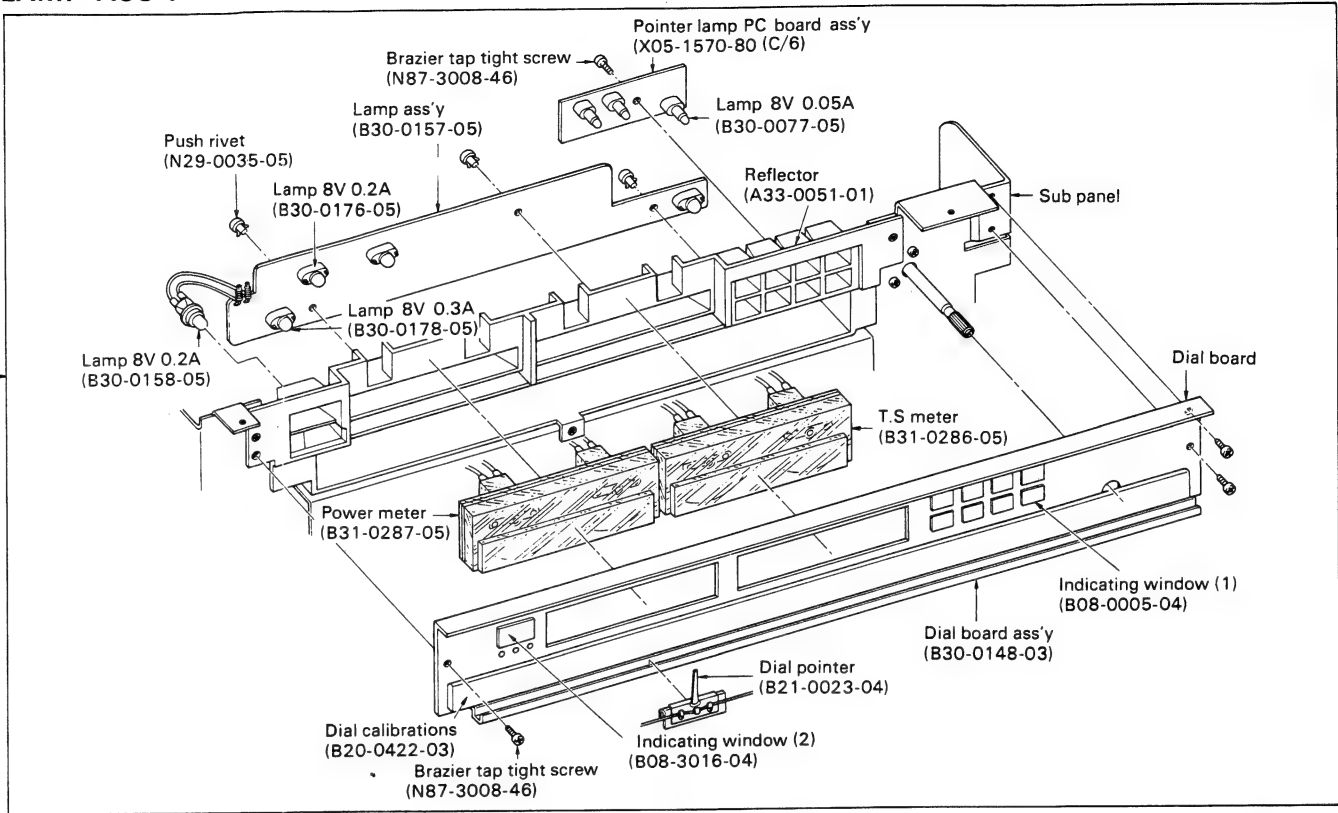
MODEL NINE G MODEL NINE G  
DISASSEMBLY FOR REPAIR



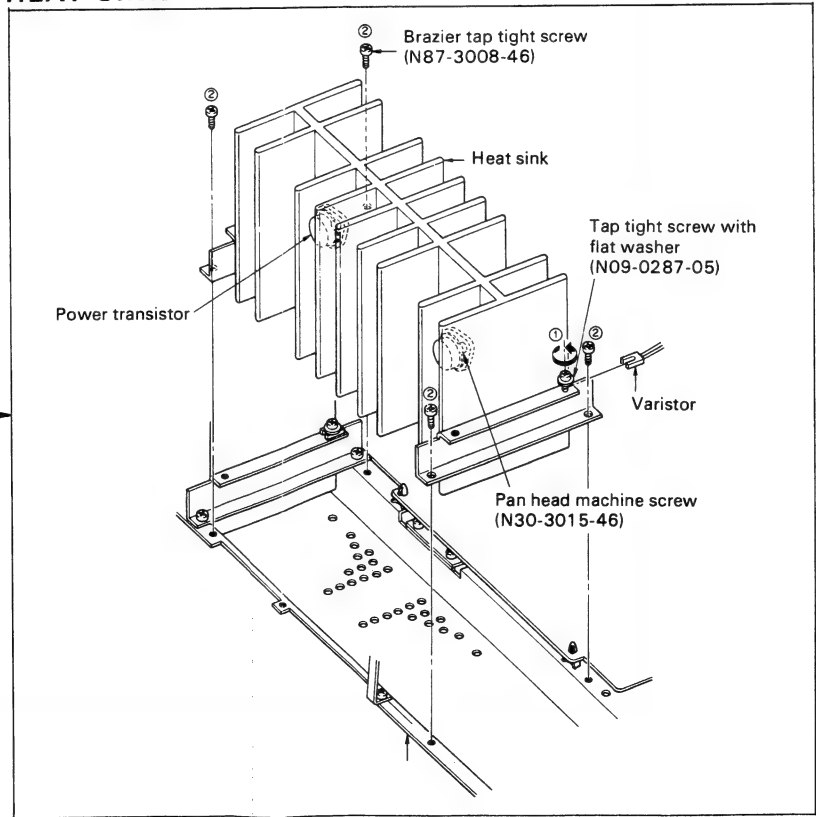
CABINET/BOTTOM BOARD/PANEL ASS'Y



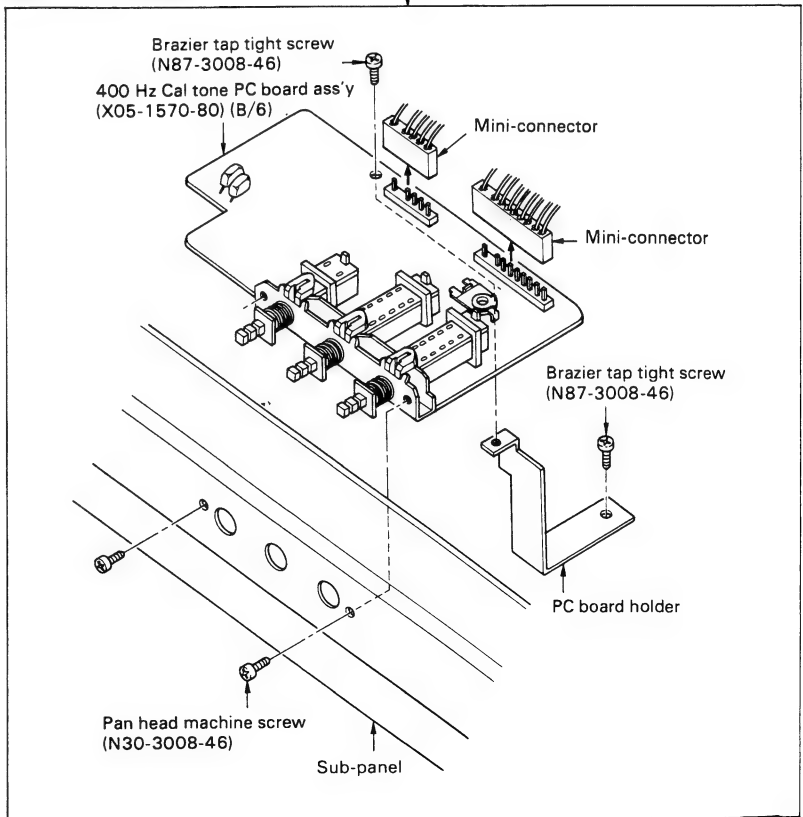
LAMP ASS'Y



HEAT SINK

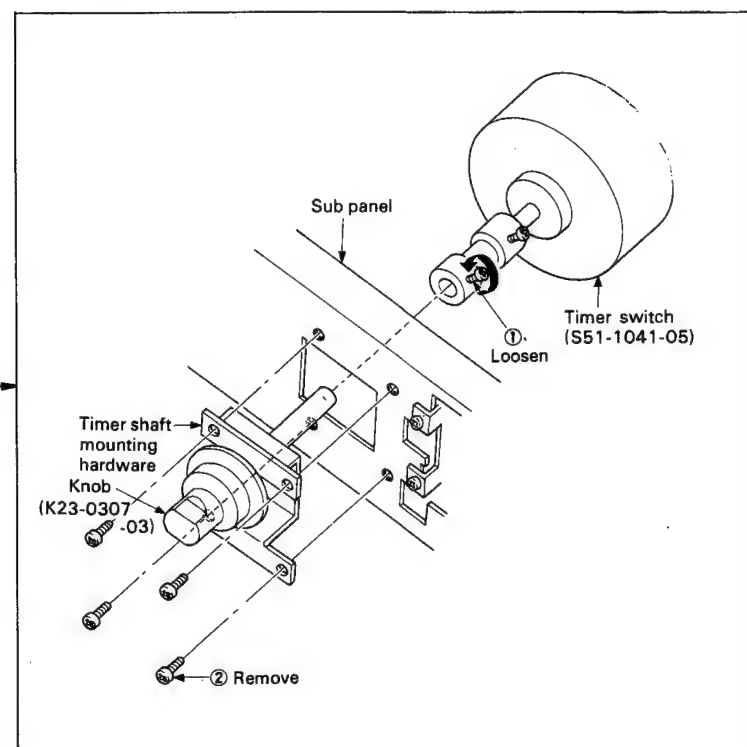


400 Hz TONE

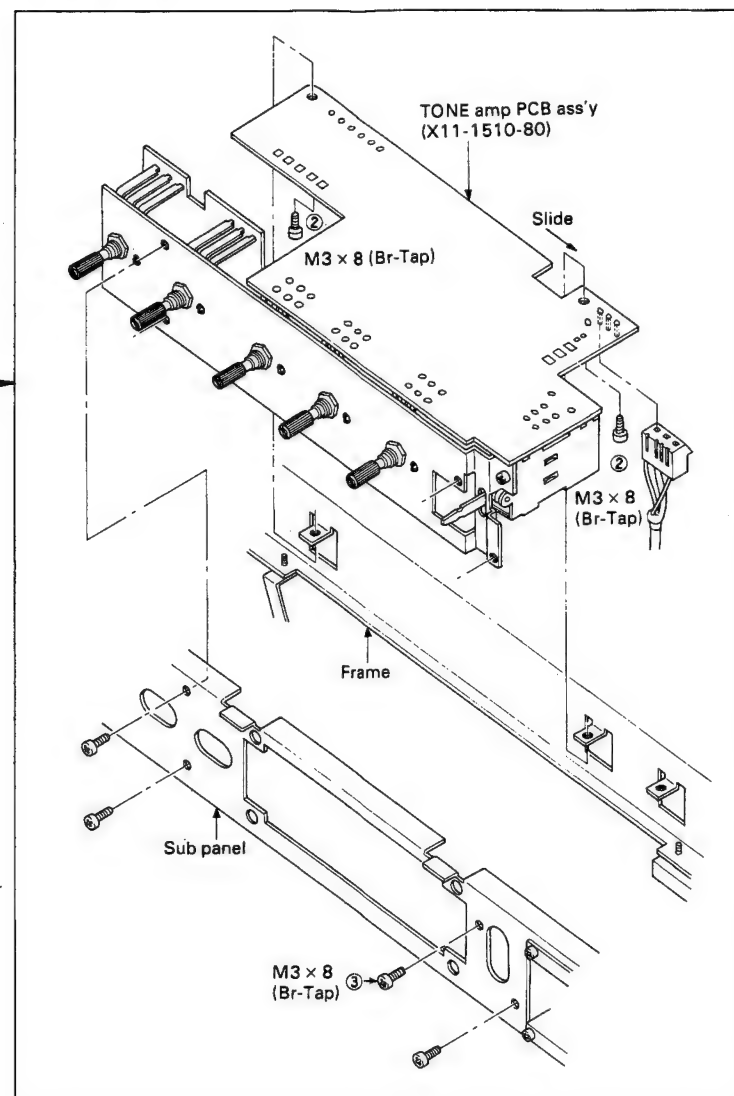


## DISASSEMBLY FOR REPAIR/DIAL CORD STRINGING

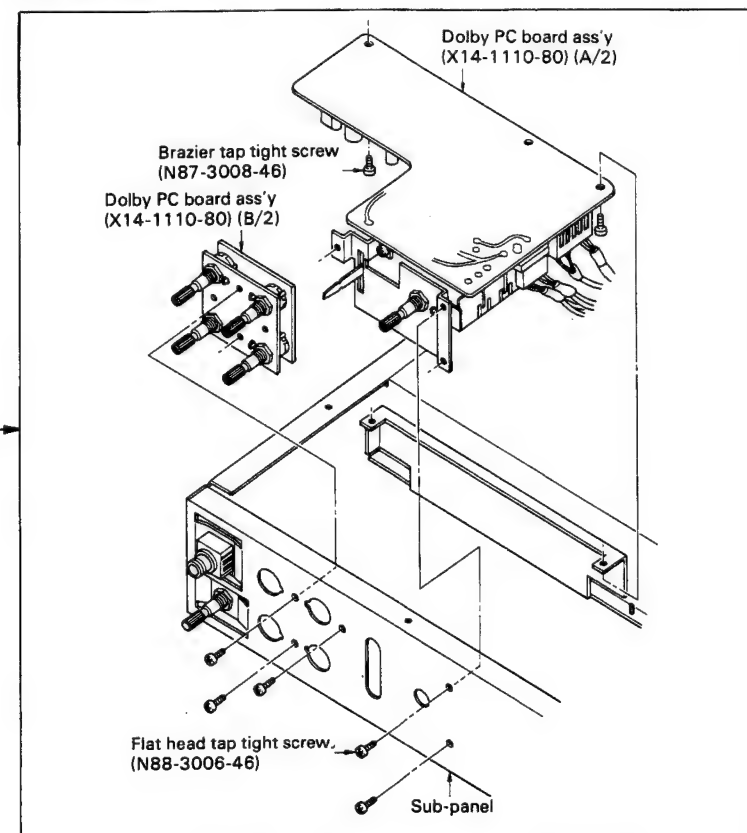
### TIMER



### TONE AMP

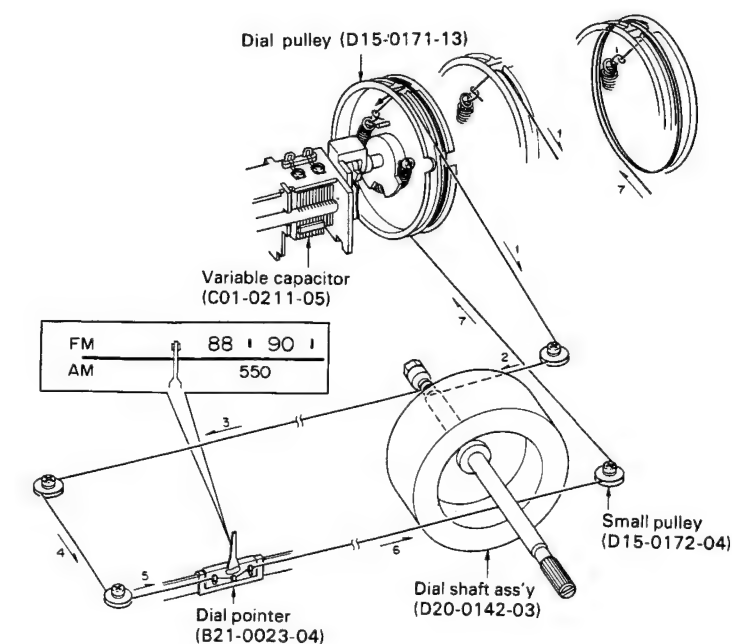


### DOLBY AMP



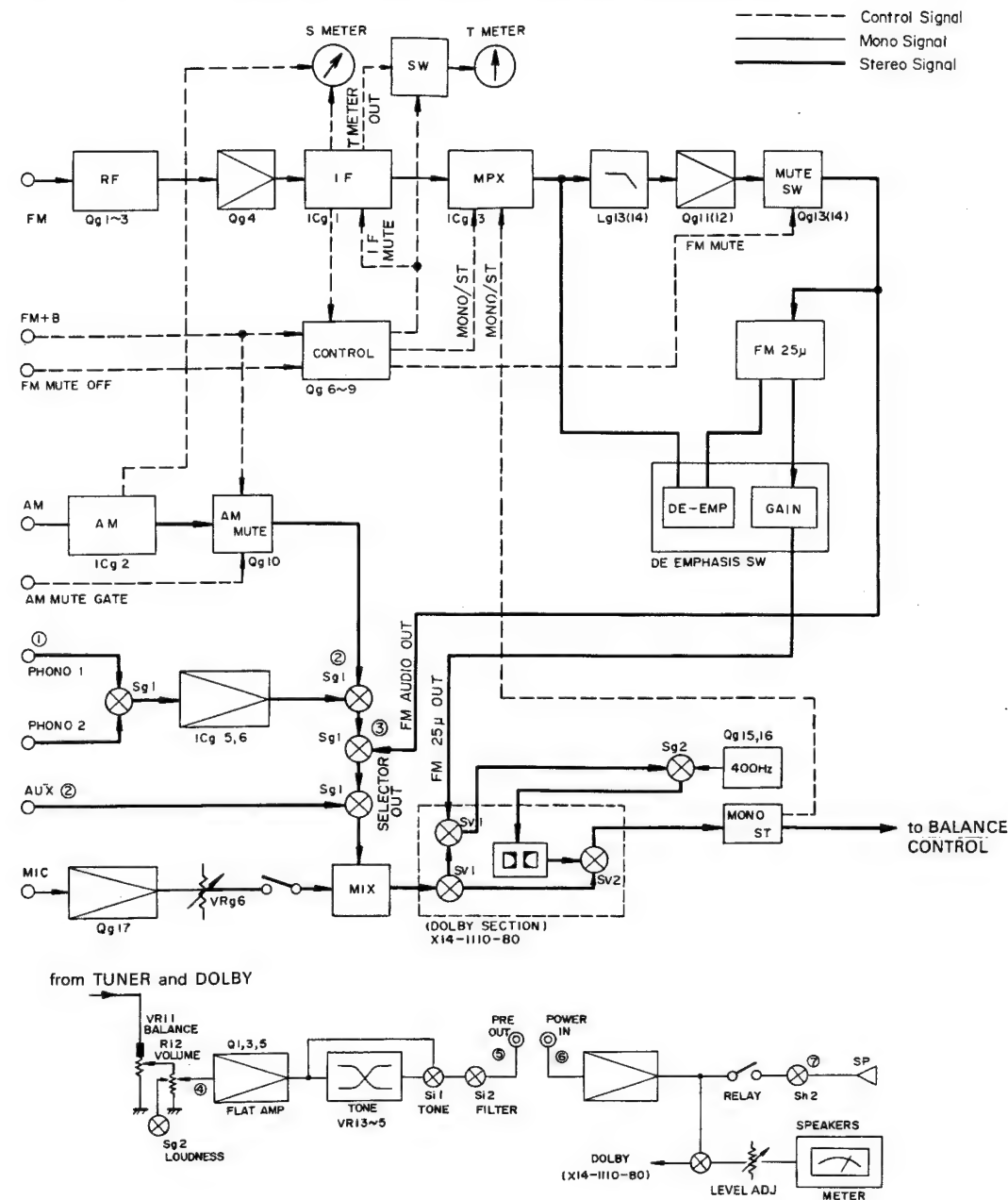
### DIAL CORD STRINGING

1. Fully open the variable capacitor.
2. Set the dial pulley as illustrated, and fix it with a screw.
3. Tie the end of the dial cord and the dial spring, giving a margin of about 10 cm.
4. Hook the spring on the boss.
5. Dress the dial cord in the direction of "1" to "2", and wind it 2 turns around the dial shaft clockwise.
6. Dress the dial cord in the direction of "3" through "7", and wind it one and half turns around the dial pulley starting from its lower side.
7. Tie the dial cord rigidly with the margin cord (about 10 cm, described in 3, above) without permitting any slack.
8. Cut off the unnecessary part of the cord, and release the dial spring from the boss.
9. Fully close the variable capacitor.
10. Mount the dial pointer in position as illustrated. This setting should be checked by receiving a suitable broadcast station actually.





BLOCK DIAGRAM/LEVEL DIAGRAM



ADJUSTMENT

NO.	ALIGN- MENT	TEST EQUIPMENTS		RECEIVER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
FM SECTION							
1	IFT	Ⓐ	95 MHz 60 dB (ANT INPUT) 1 kHz (Mod) 75 kHz (Dev)	FM 95 MHz MODE: MONO	Ⓑ	Lg5	Maximum output
2	DISCRI	—	—	FM MODE: MONO Interstation noise	T meter	Lg7 (primary)	Meter indication in the center
3		Ⓐ	95 MHz 60 dB (ANT INPUT) 1 kHz (Mod) 75 kHz (Dev)	FM 95 MHz MODE: MONO	Ⓑ	Lg7 (secondary)	Minim distortion
4	OUTPUT	ditto	ditto	ditto	ditto	—	Confirm that output voltage is 900 mV
5	TRACKING	ditto	90 MHz 1 kHz (Mod) 75 kHz (Dev)	FM 90 MHz	ditto	Lg4, 1, 2	Maximum output
6		ditto	106 MHz 1 kHz (Mod) 75 kHz (Dev)	FM 106 MHz	ditto	CTg1, 2, 3	ditto
7	VCO	Ⓐ	95 MHz 60 dB (ANT INPUT) 0 (Dev)	FM 95 MHz MODE: STEREO	Ⓒ	VRg2	Frequency counter indication is 19 kHz ± 50 Hz
8	SEPARATION	Ⓓ	FM-MPX: SELECTOR→L or R 1 kHz (Mod) PILOT (6.75 kHz)  FM-SG: 95 MHz 60 dB (ANT INPUT) 68.25 kHz (Dev)	ditto	R output (SELECTOR→L)  Ⓑ  L output (SELECTOR→R)	VRg1	Minimum output.  Adjust VRg1 so that the difference between R output and L output becomes minimum
9	DISTORTION	Ⓐ	ditto	ditto	Ⓑ	Lg5	Minimum distortion
10	DOLBY FM	Ⓐ	95 MHz 60 dB (ANT INPUT) 1 kHz (Mod) 37.5 kHz (Dev)	FM 95 MHz Sg2 - 3: OFF Sv1: <input type="checkbox"/> FM	Ⓑ	VRg3, 4	Output is 580 mV
11	400 Hz OSC LEVEL	—	—	Sg2 - 3: ON Sv1: PLAY A→B Vrv1 ~ 4: MAX	Ⓑ	Vrg5	ditto
AM SECTION							
12	TRACKING	Ⓕ	600 kHz 400Hz, 30% (Mod)	AM 600 kHz	Ⓑ	Lg9 Bar antenna	Maximum output
13		ditto	1400 kHz 400Hz, 30% (Mod)	AM 1400 kHz	Ⓑ	CTg4, 5	ditto
AUDIO SECTION							
14	BIAS CURRENT	—	—	Volume to minimum position	Ⓘ	VRe1, 2	26.5 mV
METER SECTION							
15	POWER	Ⓗ	1 kHz	AUX Set the volume so that output is 2.8V (RMS) Sh 1 - 1: 3W Sh 1 - 2: POWER	POWER/LINE meter	VRh3, 4	Meter indicates 1W
16	LINE	—	—	Sg2 - 3: ON Sv1: PLAY A→B Vrv1 ~ 4: MAX	POWER/LINE meter	VRh1, 2	Meter indicates cal.

## ADJUSTMENT

## TEST EQUIPMENT and its SPECIFICATIONS

## STANDARD SIGNAL GENERATOR (RF-SG)

**Ranges:** 90 MHz ~ 108 MHz (FM)  
500 kHz ~ 1600 kHz (AM)

**Modulation frequency:** 1 kHz, 400 Hz or external input (input level 2V or less)

**Deviation:** 0~75 kHz (FM)

**Modulation:** 0~30% (AM)

**Output:** 100 mV or more

**Distortion:** 0.5% or less

SOLID STATE VOLT METER (SSVM)

Ranges: 0.3 mV ~ 300V (full scale)

Frequency response: 5 Hz ~ 500 kHz

Impedance: 1 M $\Omega$  or more

### OSCILLOSCOPE (SCOPE)

**Ranges:** DC ~ 10 MHz

**Sensitivity:** 20 mV/cm

Impedance: 1M $\Omega$  or more

## DISTORTION METER

Ranges: 0 1% (full scale)

**Sensitivity:** 100 mV or more

FREQUENCY COUNTER (COUNTER)

Frequency response: 10 Hz~1 MHz

**Sensitivity:** 50 mV or more

Impedance: 1M $\Omega$  or more

AUDIO SIGNAL GENERATOR (AG)

**Ranges:** 5 Hz ~ 500 kHz

**Waveform:** Sine wave

**Output:** 10V r.m.s.

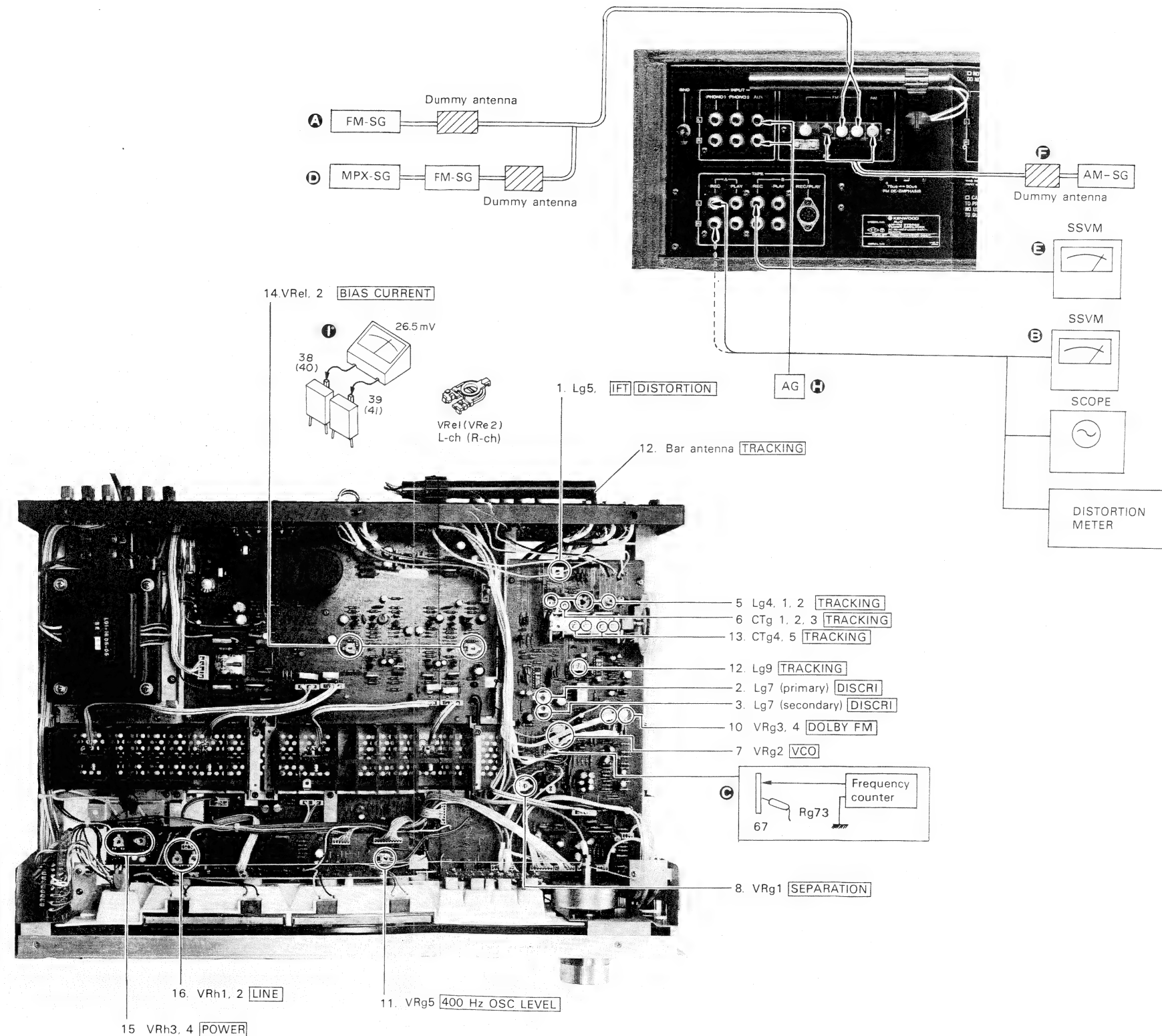
Distortion: 0.3% or less

## NOTES FOR ADJUSTMENTS

\*Use moderate instrument outputs at all times.

\*The output level of RF-SG means ANT input level.

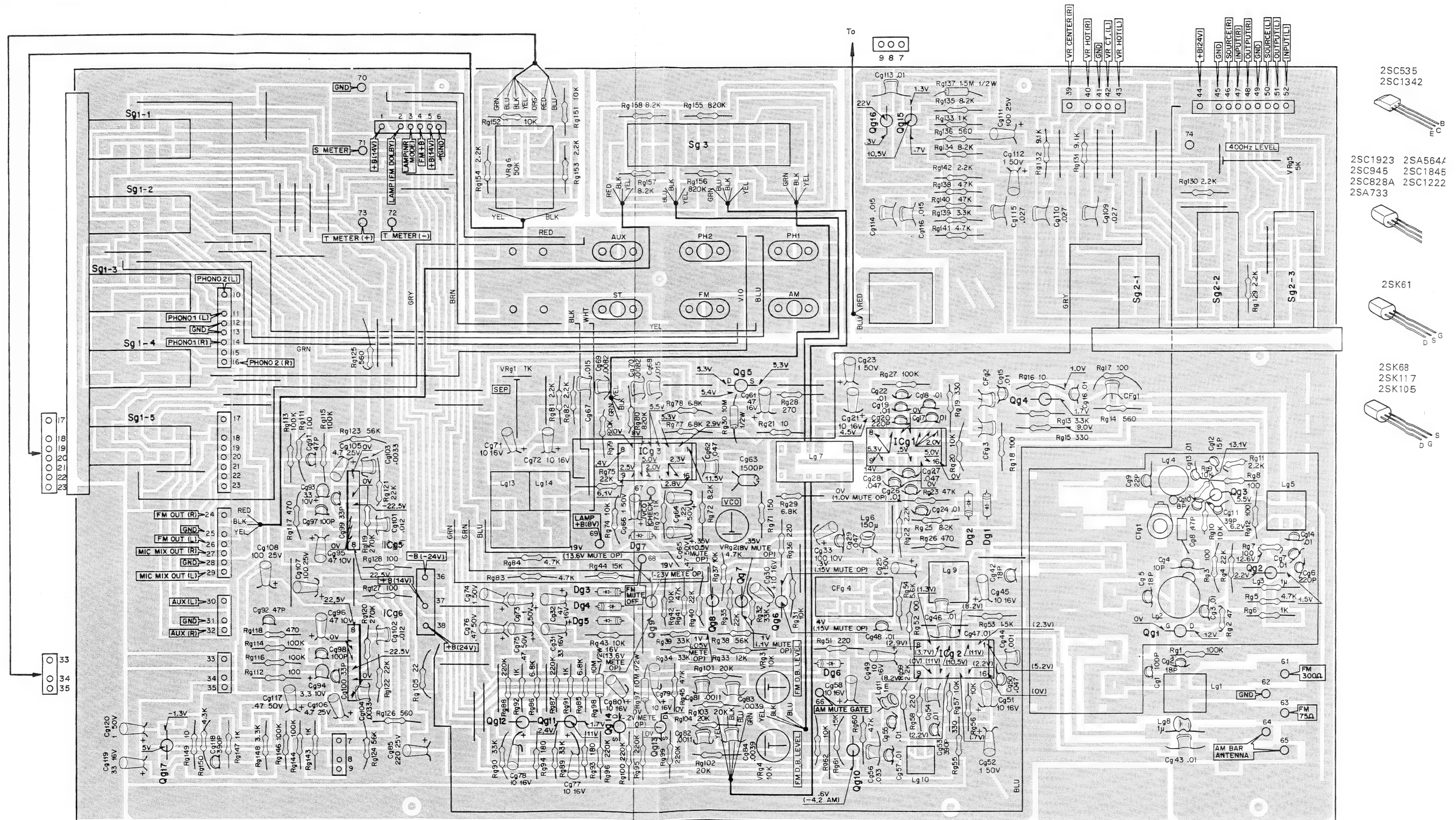
\*0 dB = 1  $\mu$ V





## PC BOARD

TUNER • PREAMP • SELECTOR (X05-1570-80) COMPONENT SIDE VIEW

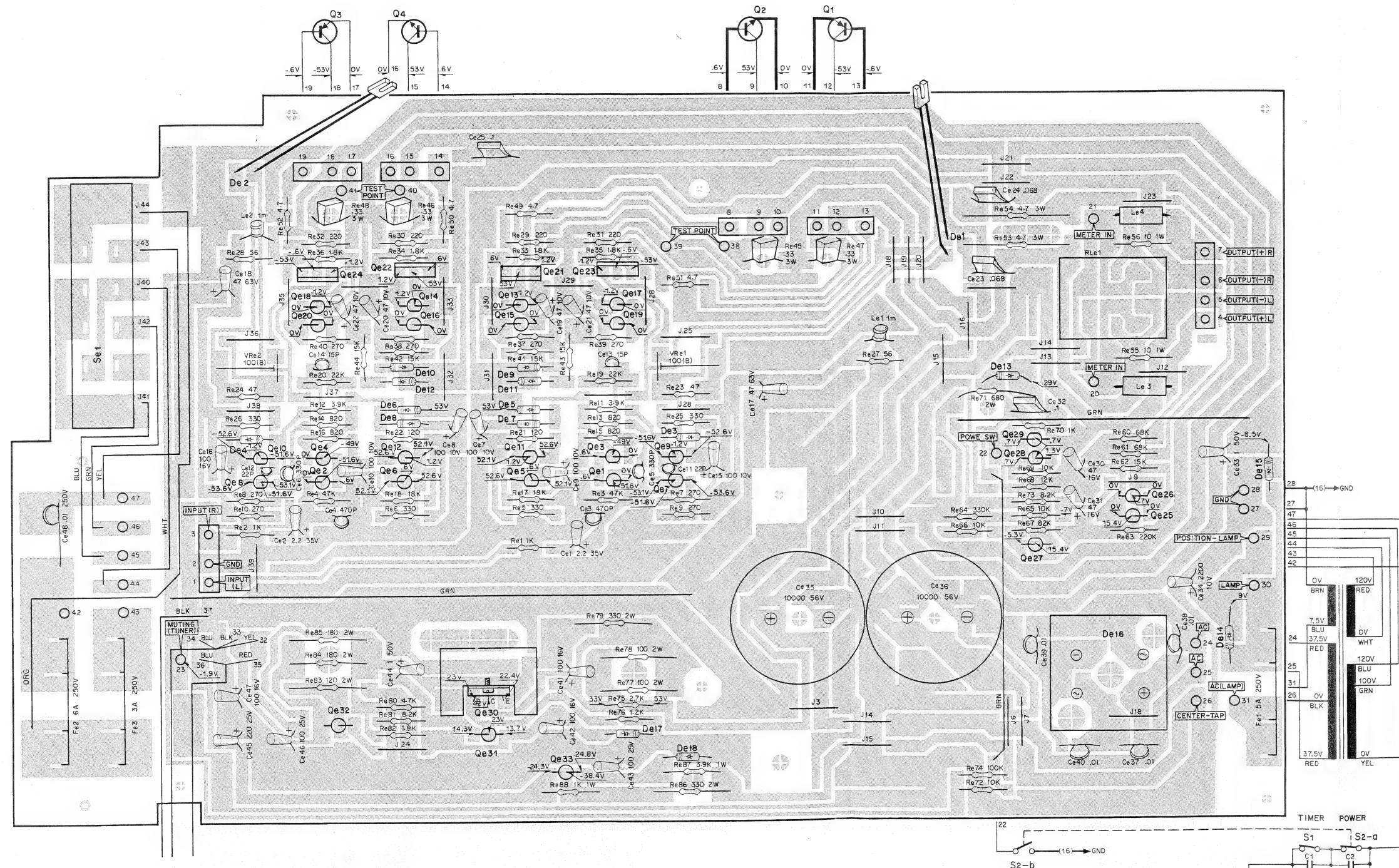


Qg1 : 2SK61, Qg2 : 2SC535 (A, B), Qg3 : 2SC1342, Qg4 : 2SC1923, Qg5, 13, 14 : 2SK117 (Y, GR, BL) or 2SK68 (L, M, N) or 2SK105 (F, H, J), Qg6 ~ 8, 10, 15, 16 : 2SC945 (Q, P) or 2SC828A (Q, R), Qg9 : 2SA733 (Q, P) or 2SA564A (Q, R, S), Qg11, 12, 17 : 2SC1845 (F, E, U) or 2SC1222, Dg1 ~ 7 : 1S1555 or 1S2076, ICg1 : HA1137W, ICg2 : HA1197 or LA1240, ICg3 : LA3350S-L6, ICg5, 6 : HA1457

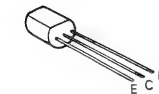


## PC BOARD

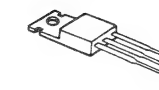
### POWER AMP-POWER SUPPLY (X07-1650-80)



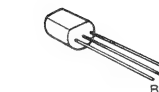
2SA921 2SB725  
2SA872 2SC1775  
2SA872A 2SC1775A  
2SA912 2SC1885  
2SA733 2SC945  
2SA777 2SC2274K  
2SC1509  
2SD767



2SA913  
2SD330  
2SC1913

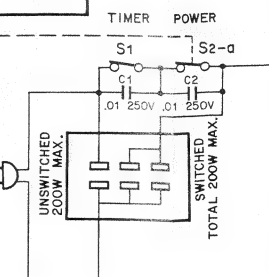


2SA850

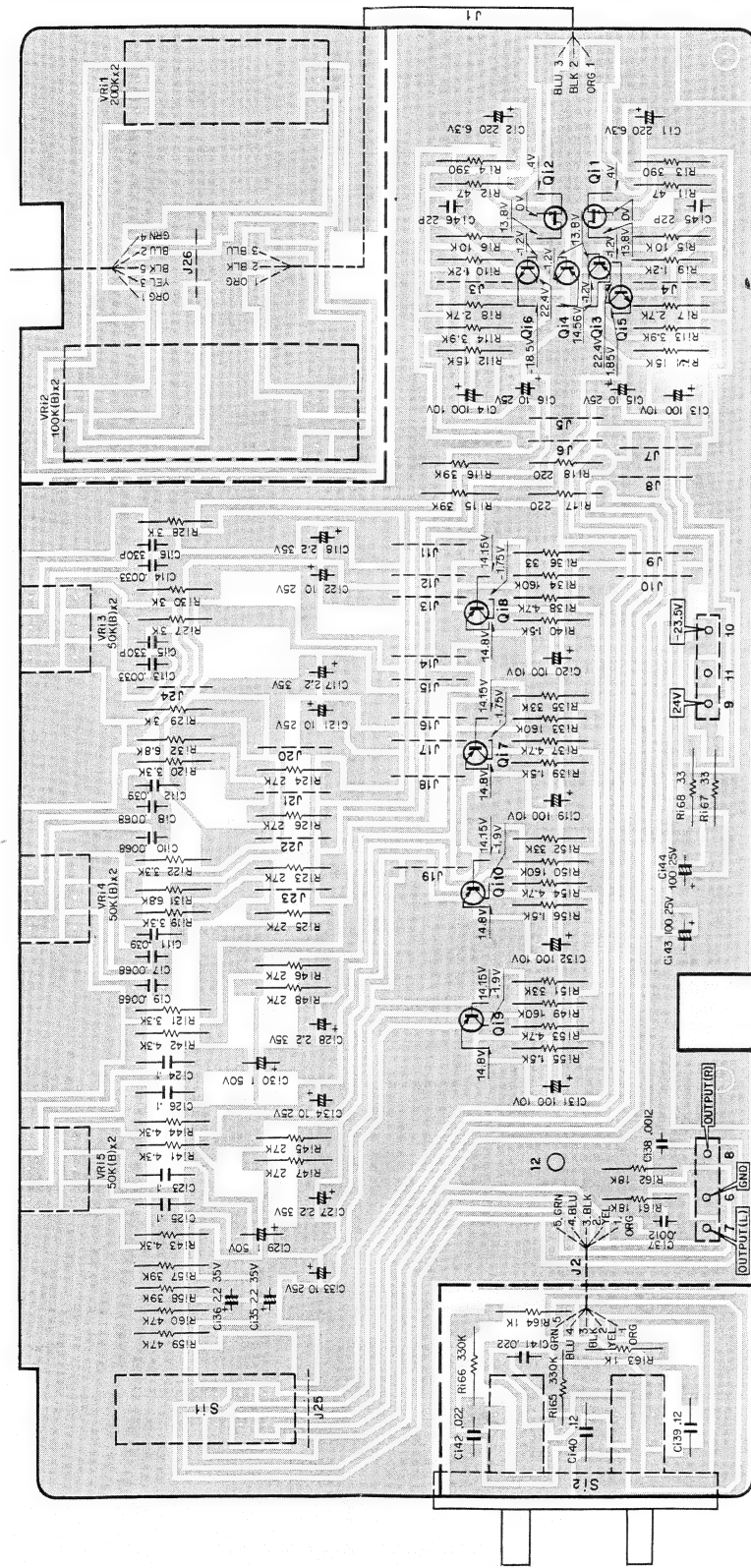


Qe1~4	: 2SA921 (S) or 2SA872 (E)	Qe15~18,25,27	: 2SC945 (R, Q) or 2SD767 (Q, R)	De1,2	: STV-4H(W)
Qe5,6	: 2SA872 or 2SA872A	Qe21,22	: 2SC1913 (Q,R)	De3~8	: 1S2076 or 1S2076A
Qe7,8,28,31	: 2SC1775 or 2SC1775A	Qe23,24	: 2SA913 (Q, R)	De9~12,15	: 1S2076A
Qe9,10	: 2SC1885 (Q, R)	Qe29	: 2SC2274K (E, F) or 2SC1509 (Q, R)	De13,14	: V06B
Qe11,12	: 2SA912 (Q,R)	Qe30	: 2SD330	De16	: M4C-51-12*1
Qe13,14,19,20,26	: 2SA733 (R, Q) or 2SB725 (Q, R)	Qe32,33	: 2SA850 or 2SA777 (Q, R)	De17	: XZ-132
				De18	: WZ-240

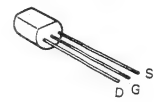
AC120/220/240V  
50/60Hz



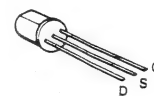
### CONTROL (X11-1510-80)



2SK68A

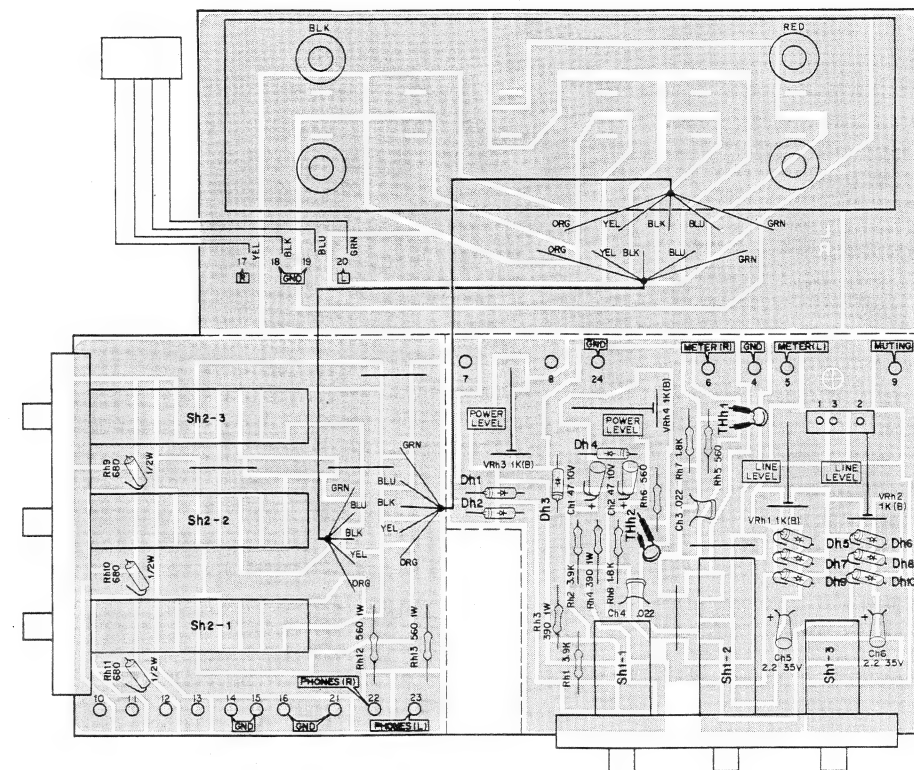


2SA872 2SC1845  
2SA992 2SC1845  
2SC945 2SC1845  
2SC1775 2SC1845



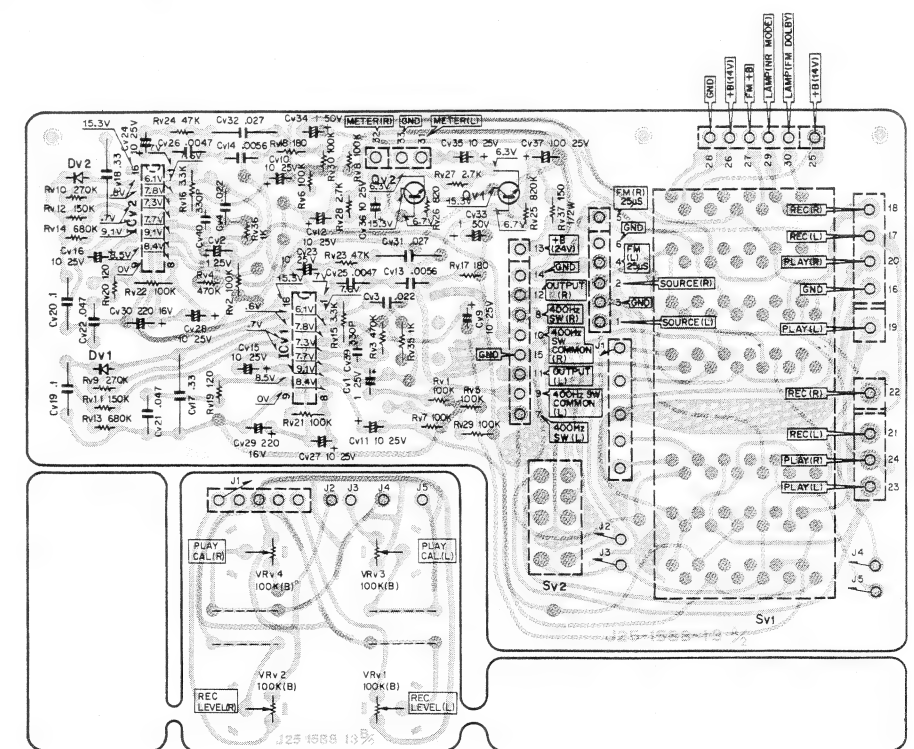
Q1,2 : 2SK68A (L, M)  
Q3,4,7~10 : 2SA992 (F, E) or 2SA872  
Q5,6 : 2SC1845 (F, E, U) or 2SC1775

### SPEAKER SELECTOR (X13-2550-80)



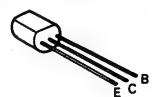
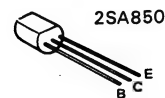
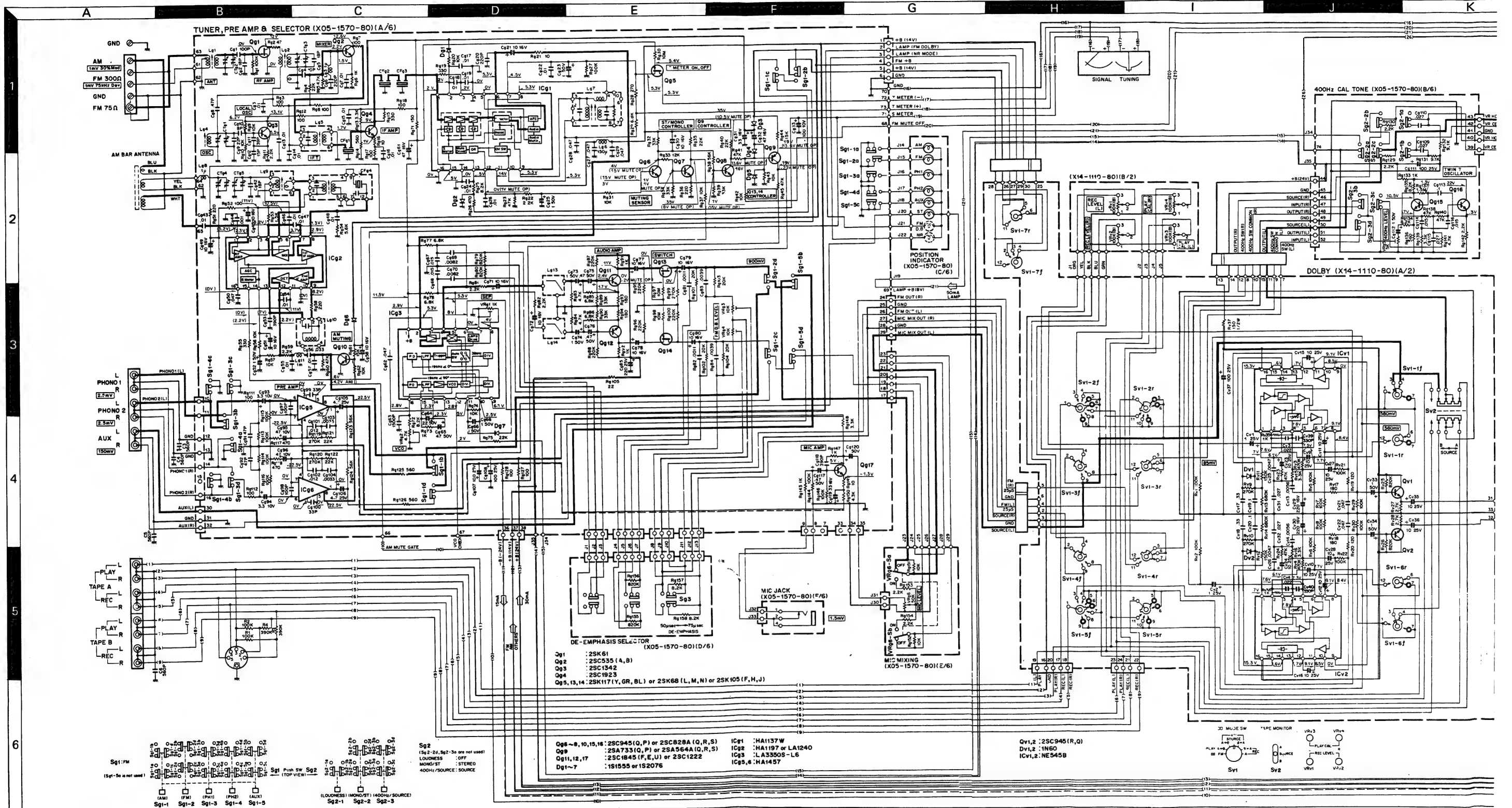
Dh1, 2 : 1N34A, Dh3, 4 : 1N60IFT, Dh5 ~ 10 : 1N60, THh1, 2 : SDT-20

### DOLBY (X14-1110-80)



Qv1, 2 : 2SC945 (R, Q), Dv1, 2 : 1N60, ICv1, 2 : NE545B





2SA539  
2SA564  
2SA733  
2SA777  
2SA872  
2SA912  
2SA921

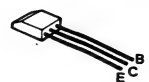
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2SB725  
2SC828  
2SC838  
2SC945  
2SC1222  
2SC1400

2SC1509  
2SC1775  
2SC1845  
2SC1885  
2SC1890  
2SC1923  
2SC2088

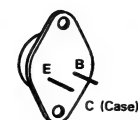
2SC2089  
2SC2274  
2SD767



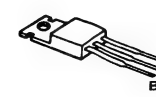
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2SC381  
2SC734  
2SC785



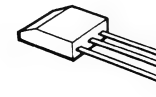
2SC535  
2SC1342



2SA747  
2SC1116



2SA839  
2SA913  
2SB536  
2SC1669  
2SC1913  
2SD330  
2SD381



2SC1213A



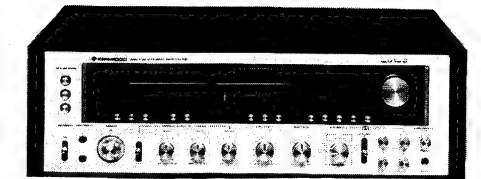
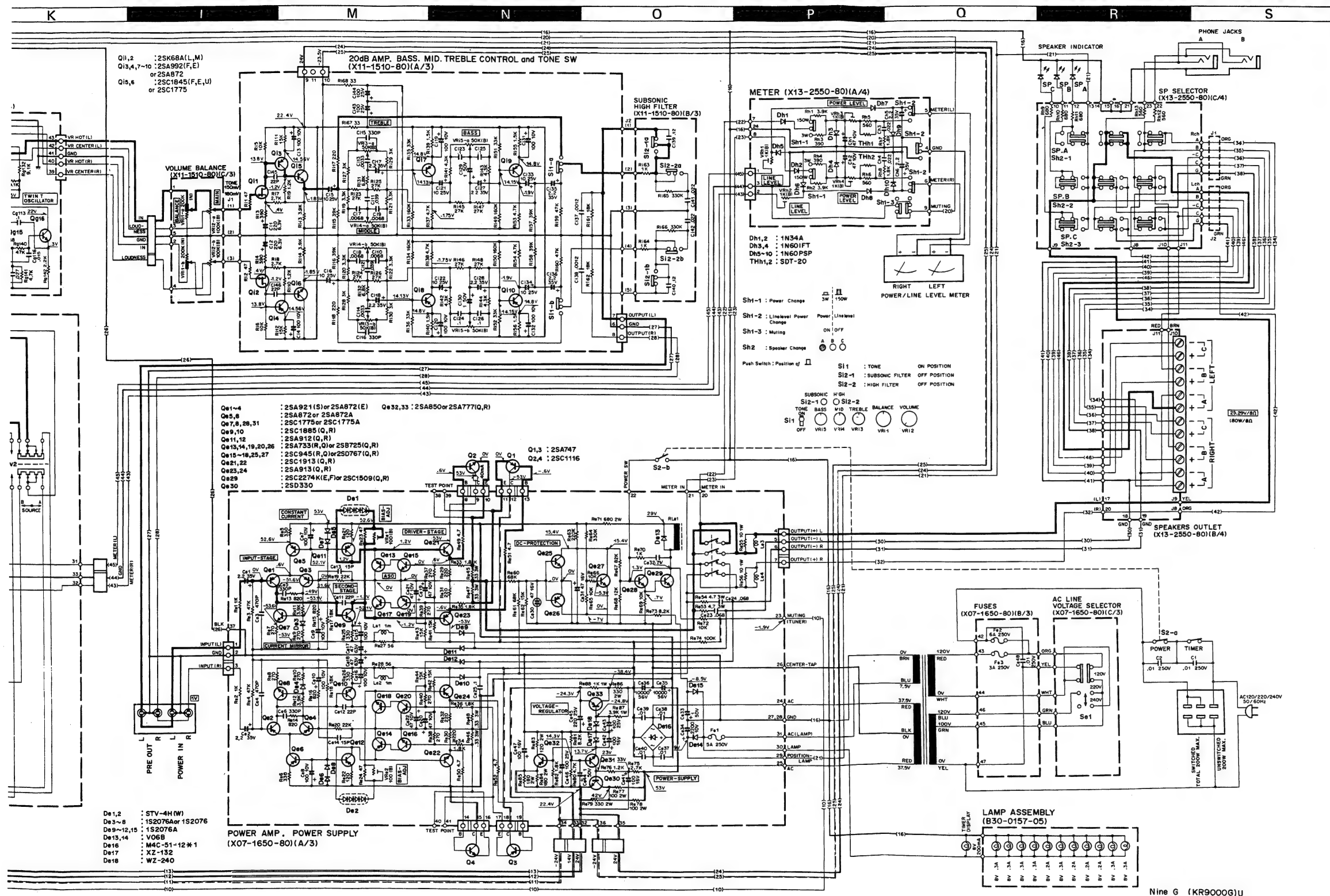
2SC1213A



VER

(KR-9000G)

# MODEL NINE G



## POWER AMPLIFIER SECTION

Power Output  
80 watts per channel minimum RMS, both channels driven, at 8 ohms from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion.

Both Channels Driven 110 + 110W 4Ω at 1 kHz  
Dynamic Power Output 280W 4Ω  
Total Harmonic Distortion 0.03% at rated power into 8Ω  
0.01% at 1/2 rated power into 8Ω  
Intermodulation Distortion 0.03% at rated power into 8Ω  
(60 Hz : 7 kHz = 4 : 1)  
Power Bandwidth 5 Hz to 100,000 Hz  
Frequency Response 5 Hz to 100,000 Hz -1.5 dB  
Signal to Noise Ratio 115 dB (short circuited)  
Damping Factor 40 at 8 ohms  
Input Sensitivity/Impedance 1.0V/50 kΩ  
Speaker Impedance Accept 4Ω to 16Ω

## PRE AMPLIFIER SECTION

Input Sensitivity/Impedance/Signal to Noise Ratio (IHF A curve)  
Phono 1 2.5 mV/50 kΩ/80 dB  
Phono 2 2.5 mV/50 kΩ/80 dB  
AUX 150 mV/50 kΩ/110 dB  
Tape A, B 150 mV/50 kΩ/110 dB  
Mic 1.5 mV/10 kΩ/70 dB  
Maximum Input Level for Phono 230 mV (RMS), T.H.D. 0.03% at 1,000 Hz  
Frequency Response  
Phono RIAA standard 30 Hz to 20 kHz ±0.3 dB  
AUX and Tape 10 Hz to 40,000 Hz -1.0 dB  
Tone Control  
Bass ±12 dB at 50 Hz  
Mid ±12 dB at 800 Hz  
Treble ±12 dB at 15 kHz  
Loudness Control (-30 dB Vol) -15 dB at 18 Hz  
Subsonic Filter -6 dB at 10 kHz  
High Filter  
Output Level/Impedance  
Tape REC (Pin) A 150 mV/100Ω  
B 150 mV/100Ω  
A 30 mV/80 kΩ  
B 120 mV/80 kΩ  
1.0V/1 kΩ  
Pre Out

## FM TUNER SECTION

Usable Sensitivity 10.3 dBf (1.8 μV)  
50 dB Quiet Sensitivity  
Mono 14.7 dBf (3.0 μV)  
Stereo 37.2 dBf (40 μV)  
Signal to Noise Ratio at 65 dBf  
Mono 80 dB  
Stereo 74 dB  
Total Harmonic Distortion at 65 dBf  
Mono 0.1% at 1 kHz  
Stereo 0.15% at 1 kHz  
Frequency Response 30 Hz to 15,000 Hz ±0.5 -1.0 dB  
Capture Ratio 1.0 dB  
Alternate Channel Selectivity 75 dB  
Spurious Response Ratio 85 dB  
Image Response Ratio 60 dB  
IF Response Ratio 75 dB  
AM Suppression Ratio at 65 dBf 65 dB  
Stereo Separation 48 dB at 1,000 Hz  
38 dB at 50 Hz to 15,000 Hz  
46 dB  
Sub Carrier Product Rejection 3000 balanced and 75Ω unbalanced  
Antenna Impedance 88 MHz to 108 MHz

## AM TUNER SECTION

Usable Sensitivity 20 μV  
Signal to Noise Ratio 50 dB  
Image Rejection 55 dB  
Selectivity 30 dB  
IF Rejection 30 dB  
Total Harmonic Distortion 0.5%

## GENERAL

Power Requirement 50/60 Hz 110-120V/220-240V  
Power Consumption 550 watts at full power  
A C Outlet Switched 2 Unswitched 1  
Dimensions W 624 mm (24.9/16")  
H 206 mm (8.1/8")  
D 460 mm (18.1/8")  
Weight 19.8 kg (43.5 lb)  
(Gross) 24.3 kg (53.6 lb)

NOTE:  
Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

# MODEL NINE G MODEL NINE G

## PARTS LIST

☆: New parts  
Carbon: Carbon film resistor  
RC: Carbon composition resistor  
RW: Wire wound power resistor  
RN: Metal film resistor  
RS: Metal oxide film resistor

The parts No. of the resistor and the capacitor is changed into computer code.

U: PX, M<sub>1</sub>: Other area, M<sub>2</sub>: KR-9000

### TOTAL

Ref. No.	Parts No.	Description	Re- marks
—	A03-0236-02	Cabinet (A)	
—	A03-0237-02	Cabinet (B)	
—	A20-1318-03	Panel ass'y	U, M <sub>1</sub> ☆
—	A20-1319-03	Panel ass'y	M <sub>2</sub> ☆
—	B01-0121-04	Escutcheon (L)	
—	B01-0122-04	Escutcheon (R)	
—	B01-0123-03	Escutcheon	☆
—	B07-0230-14	Escutcheon (Shaft)	
—	B07-0234-03	Lever escutcheon (TONE, TAPE)	
—	B07-0235-04	Lever escutcheon (POWER)	
—	B07-0243-04	Pushbutton switch ring (SPEAKER)	
—	B07-0244-03	Pushbutton switch ring (SELECTOR)	
—	B07-0245-03	Pushbutton switch ring (LOUDNESS/METER)	☆
—	B07-0246-03	Pushbutton switch ring (FILTER/SUBSONIC)	☆
—	B08-0005-04	Indicator (Selector)	
—	B08-2017-14	Indicator (TIMER)	
—	B08-3016-04	Indicator (Speaker)	
—	B10-0238-03	Frontglass	
—	B20-0422-03	Dial calibrations	
—	B21-0023-04	Dial pointer	
—	B30-0077-05	Pilot lamp × 2	
—	B30-0157-05	Pilot lamp ass'y	
—	B30-0158-05	Pilot lamp (8V, 200mA)	
—	B30-0159-05	LED × 3	
—	B31-0286-05	Meter (Tuning, Signal)	
—	B31-0287-05	Meter (POWER)	
—	B42-0009-04	Passed sticker	
—	B46-0062-20	Warranty card	U, M <sub>2</sub>
—	B46-0063-00	Warranty card	U
—	B50-1768-00	Instruction manual	U, M <sub>1</sub> ☆
—	B50-1770-00	Instruction manual	M <sub>2</sub> ☆
—	B59-0018-00	KENWOOD service stations' list	U
C1,2	C91-0023-05	Ceramic 0.01μF AC 250 WV	
C3~6	C52-1756-16	Ceramic 560pF ±10%	
—	D15-0171-13	Dial pulley	
—	D15-0172-04	Pulley × 4	
—	D20-0142-03	Dial shaft	
—	D21-0450-03	Timer shaft	
—	D22-0033-04	Coupler	
—	D32-0082-04	Switch stopper (Power voltage)	
—	E02-0004-05	Transistor socket × 4	
—	E03-0007-05	AC outlet	
—	E06-0501-05	DIN connector	

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## PARTS LIST

### TUNER (X05-1570-80)

Ref. No.	Parts No.	Description	Re- marks
—	B30-0077-05	Pilot lamp (8V, 50mA) × 6	
—	C01-0211-05	Variable capacitor	
—	C05-0055-05	Ceramic trimmer (6P)	
Cg1	C71-1710-16	Ceramic 100pF ±10%	
Cg2	C71-1718-06	Ceramic 18pF ±10%	
Cg3	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg4	C71-1710-02	Ceramic 10pF ±0.5pF	
Cg5	C71-1718-06	Ceramic 18pF ±10%	
Cg6	C71-1722-16	Ceramic 220pF ±10%	
Cg7	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg8	C91-0037-05	Low capacitive 0.47pF	
Cg9	C59-1722-05	Ceramic 22pF ±5%	
Cg10	C66-1708-02	Ceramic 8pF ±5%	
Cg11	C63-1739-06	Ceramic 39pF ±10%	
Cg12	C63-1715-06	Ceramic 15pF ±10%	
Cg13~19	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg20	C71-1722-16	Ceramic 220pF ±10%	
Cg21	C24-1210-61	Electrolytic 10μF 16WV	
Cg22	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg23	C24-1710-51	Electrolytic 1μF 50WV	
Cg24	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg25	C24-1710-51	Electrolytic 1μF 50WV	
Cg26	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg27~29	C55-1747-38	Ceramic 0.047μF +80%—20%	
Cg30	C24-1210-61	Electrolytic 10μF 16WV	
Cg31	C24-1233-61	Electrolytic 33μF 16WV	
Cg32	C24-1247-61	Electrolytic 47μF 16WV	
Cg33	C24-1010-71	Electrolytic 100μF 10WV	
Cg42	C70-1718-06	Ceramic 18pF ±10%	
Cg43	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg44	C46-1710-27	Mylar 0.001μF ±20%	
Cg45	C24-1210-61	Electrolytic 10μF 16WV	
Cg46,47	C46-1710-37	Mylar 0.01μF ±20%	
Cg48	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg49	C24-1210-61	Electrolytic 10μF 16WV	
Cg50	C55-1747-38	Ceramic 0.047μF +80%—20%	
Cg51	C24-1210-61	Electrolytic 10μF 16WV	
Cg52	C24-1710-51	Electrolytic 1μF 50WV	
Cg53	C52-1739-16	Ceramic 390pF ±10%	
Cg54	C46-1710-37	Mylar 0.01μF ±20%	
Cg55	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg56	C46-1733-37	Mylar 0.033μF ±20%	
Cg57	C55-1710-38	Ceramic 0.01μF +80%—20%	
Cg58	C24-1210-61	Electrolytic 10μF 16WV	
Cg61	C24-1247-61	Electrolytic 47μF 16WV	
Cg62	C46-1747-37	Mylar 0.047μF ±20%	
Cg63	C48-1715-25	Mylar 0.0015μF ±5%	
Cg64	C25-1722-47	Electrolytic 0.22μF 50WV	
Cg65	C25-1747-47	Electrolytic 0.47μF 50WV	
Cg66	C24-1710-51	Electrolytic 1μF 50WV	
Cg67,68	C46-1715-35	Mylar 0.015μF ±5%	
Cg69,70	C46-1782-25	Mylar 0.0082μF ±5%	
Cg71,72	C24-1210-61	Electrolytic 10μF 16WV	
Cg73,74	C24-1710-51	Electrolytic 1μF 50WV	
Cg75,76	C25-1747-47	Electrolytic 0.47μF 50WV	
Cg77~80	C24-1210-61	Electrolytic 10μF 16WV	
Cg81,82	C46-1711-25	Mylar 0.0011μF ±5%	
Cg83,84	C46-1739-25	Mylar 0.0039μF ±5%	
Cg85	C24-1422-71	Electrolytic 220μF 25WV	
Cg91,92	C71-1747-06	Ceramic 47pF ±10%	
Cg93,94	C81-1033-57	Tantalum 3.3μF 10WV	
Cg95,96	C24-1047-61	Electrolytic 47μF 10WV	
Cg97,98	C71-1710-16	Ceramic 100pF ±10%	
Cg99,100	C71-1733-06	Ceramic 33pF ±10%	

Ref. No.	Parts No.	Description	Re- marks
Cg101,102	C46-1712-35	Mylar 0.012μF ±5%	
Cg103,104	C46-1733-25	Mylar 0.0033μF ±5%	
Cg105,106	C25-1447-57	Electrolytic 4.7μF 25WV	
Cg107,108	C24-1410-71	Electrolytic 100μF 25WV	
Cg109,110	C46-1727-35	Mylar 0.027μF ±5%	
Cg111	C24-1410-71	Electrolytic 100μF 25WV	
Cg112	C24-1710-51	Electrolytic 1μF 50WV	
Cg113	C46-1710-47	Mylar 0.1μF ±20%	
Cg114	C46-1715-35	Mylar 0.015μF ±5%	
Cg115	C46-1727-35	Mylar 0.027μF ±5%	
Cg116	C46-1715-35	Mylar 0.015μF ±5%	
Cg117	C25-1747-47	Electrolytic 0.47μF 50WV	
Cg118	C52-1739-16	Ceramic 390pF ±10%	
Cg119	C24-1233-61	Electrolytic 33μF 16WV	
Cg120	C24-1710-51	Electrolytic 1μF 50WV	
—	E11-0065-05	Phone jack	
Lg1	L31-0361-05	FM ANT Coil	
Lg2	L31-0410-05	FM RF Coil	
Lg3	L40-1091-41	Inductor	
Lg4	L32-0210-05	FM OSC Coil	
Lg5	L30-0282-05	FM IFT	
Lg6	L40-1511-03 or L40-1511-44 or L40-1512-03 or L40-1512-44	Inductor	
Lg7	L30-0314-05	FM IFT	☆
Lg8	L40-1092-03 or L40-1092-44	Inductor	
Lg9	L32-0217-05	AM OSC Coil	☆
Lg10	L30-0284-05	AM Detector Coil	
Lg11	L40-1021-03 or L40-1021-45	Inductor	
Lg13	L79-0029-05	Low pass filter	
Lg14	L79-0030-05	Low pass filter	
CFg1~3	L72-0052-15	FM Ceramic filter	
CFg4	L72-0030-05 or L72-0035-05	AM Ceramic filter	
VRg1	R12-1021-05	PC trimming 1 kΩ (SEPARATION)	
VRg2	R12-1040-05	PC trimming 4.7 kΩ (VCO)	
VRg3,4	R12-3045-05	PC trimming 10 kΩ	
VRg5	R12-2016-05	PC trimming 5 kΩ (400 Hz LEVEL)	
VRg6	R01-4026-05	Potentiometer 50 kΩ with switch (MIC)	☆
Rg1	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Rg2	R43-6247-05	Carbon 47Ω ±5% 1/4W	
Rg3	R43-6210-15	Carbon 100Ω ±5% 1/4W	
Rg4	R43-6222-35	Carbon 22kΩ ±5% 1/4W	
Rg5	R43-6247-25	Carbon 4.7kΩ ±5% 1/4W	
Rg6	R43-6210-25	Carbon 1kΩ ±5% 1/4W	
Rg7	R43-6210-15	Carbon 100Ω ±5% 1/4W	
Rg8	R43-6210-15	Carbon 100Ω ±5% 1/4W	
Rg9,10	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Rg11	R43-6222-25	Carbon 2.2kΩ ±5% 1/4W	
Rg12	R43-6210-15	Carbon 100Ω ±5% 1/4W	
Rg13	R43-6233-25	Carbon 3.3kΩ ±5% 1/4W	
Rg14	R43-6256-15	Carbon 560Ω ±5% 1/4W	
Rg15	R43-6233-15	Carbon 330Ω ±5% 1/4W	
Rg16	R43-6210-05	Carbon 10Ω ±5% 1/4W	
Rg17,18	R43-6210-15	Carbon 100Ω ±5% 1/4W	
Rg19	R43-6233-15	Carbon 330Ω ±5% 1/4W	
Rg20	R43-6210-35	Carbon 10kΩ ±5% 1/4W	

# MODEL NINE G MODEL NINE G

## PARTS LIST

Ref. No.	Parts No.	Description	Re- marks
Rg21	R43-6210-05	Carbon 10Ω ±5% 1/4W	
Rg22	R43-6222-25	Carbon 2.2kΩ ±5% 1/4W	
Rg23	R43-6247-35	Carbon 47kΩ ±5% 1/4W	
Rg25	R43-6282-25	Carbon 8.2kΩ ±5% 1/4W	
Rg26	R43-6247-15	Carbon 470Ω ±5% 1/4W	
Rg27	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Rg28	R43-6227-15	Carbon 270Ω ±5% 1/4W	
Rg29	R43-6268-25	Carbon 6.8kΩ ±5% 1/4W	
Rg30	R40-8310-68	RC 10MΩ ±20% 1/2W	
Rg31	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Rg32	R43-6233-35	Carbon 33kΩ ±5% 1/4W	
Rg33	R43-6212-35	Carbon 12kΩ ±5% 1/4W	
Rg34	R43-6233-35	Carbon 33kΩ ±5% 1/4W	
Rg35	R43-6222-35	Carbon 22kΩ ±5% 1/4W	
Rg36	R43-6222-15	Carbon 220Ω ±5% 1/4W	
Rg37	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Rg38	R43-6256-35	Carbon 56kΩ ±5% 1/4W	
Rg39	R43-6233-35	Carbon 33kΩ ±5% 1/4W	
Rg40	R43-6222-35	Carbon 22kΩ ±5% 1/4W	
Rg41	R43-6247-35	Carbon 47kΩ ±5% 1/4W	
Rg42,43	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Rg44	R43-6215-35	Carbon 15kΩ ±5% 1/4W	
Rg45	R43-6247-35	Carbon 47kΩ ±5% 1/4W	
Rg51	R43-6222-15	Carbon 220Ω ±5% 1/4W	
Rg52	R43-6210-15	Carbon 100Ω ±5% 1/4W	
Rg53	R43-6215-25	Carbon 1.5kΩ ±5% 1/4W	
Rg54	R43-6256-25	Carbon 5.6kΩ ±5% 1/4W	
Rg55	R43-6233-15	Carbon 330Ω ±5% 1/4W	
Rg56,57	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Rg58	R43-6222-15	Carbon 220Ω ±5% 1/4W	
Rg59	R43-6222-25	Carbon 2.2kΩ ±5% 1/4W	
Rg60	R43-6247-35	Carbon 47kΩ ±5% 1/4W	
Rg61	R43-6215-35	Carbon 15kΩ ±5% 1/4W	
Rg62	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Rg71	R43-6215-15	Carbon 150Ω ±5% 1/4W	
Rg72	R43-6282-25	Carbon 8.2kΩ ±5% 1/4W	
Rg73	R43-6210-25	Carbon 1kΩ ±5% 1/4W	
Rg74	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Rg75	R43-6222-35	Carbon 22kΩ ±5% 1/4W	
Rg77,78	R43-6268-25	Carbon 6.8kΩ ±5% 1/4W	
Rg79,80	R43-6282-45	Carbon 820kΩ ±5% 1/4W	
Rg81,82	R43-6222-25	Carbon 2.2kΩ ±5% 1/4W	
Rg83,84	R43-6247-25	Carbon 4.7kΩ ±5% 1/4W	
Rg85,86	R43-6268-25	Carbon 6.8kΩ ±5% 1/4W	
Rg87,88	R43-6222-45	Carbon 220kΩ ±5% 1/4W	
Rg89,90	R43-6233-35	Carbon 33kΩ ±5% 1/4W	
Rg91,92	R43-6210-25	Carbon 1kΩ ±5% 1/4W	
Rg93,94	R43-6218-15	Carbon 180Ω ±5% 1/4W	
Rg95,96	R43-6222-45	Carbon 220kΩ ±5% 1/4W	
Rg97,98	R40-8310-68	RC 10MΩ ±20% 1/2W	
Rg99,100	R43-6222-45	Carbon 220kΩ ±5% 1/4W	
Rg101~104	R43-6220-35	Carbon 20kΩ ±5% 1/4W	
Rg105	R43-6222-05	Carbon 22Ω ±5% 1/4W	
Rg111,112	R43-6210-15	Carbon 100Ω ±5% 1/4W	
Rg113~116	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Rg117,118	R43-6247-15	Carbon 470Ω ±5% 1/4W	
Rg119,120	R43-6227-45	Carbon 270kΩ ±5% 1/4W	
Rg121,122	R43-6222-35	Carbon 22kΩ ±5% 1/4W	
Rg123,124	R43-6256-35	Carbon 56kΩ ±5% 1/4W	
Rg125,126	R43-6256-15	Carbon 560Ω ±5% 1/4W	
Rg127,128	R43-6210-15	Carbon 100Ω ±5% 1/4W	
Rg129,130	R43-6222-25	Carbon 2.2kΩ ±5% 1/4W	

Ref. No.	Parts No.	Description	Re- marks
Rg131,132	R43-6291-25	Carbon 9.1kΩ ±5% 1/4W	
Rg133	R43-6210-25	Carbon 1kΩ ±5% 1/4W	
Rg134,135	R43-6282-25	Carbon 8.2kΩ ±5% 1/4W	
Rg136	R43-6256-15	Carbon 560Ω ±5% 1/4W	
Rg137	R40-8315-58	RC 1.5MΩ ±20% 1/2W	
Rg138	R43-6247-35	Carbon 47kΩ ±5% 1/4W	
Rg139	R43-6233-25	Carbon 3.3kΩ ±5% 1/4W	
Rg140	R43-6247-35	Carbon 47kΩ ±5% 1/4W	
Rg141	R43-6247-25	Carbon 4.7kΩ ±5% 1/4W	
Rg142	R43-6222-25	Carbon 2.2kΩ ±5% 1/4W	
Rg143	R43-6210-25	Carbon 1kΩ ±5% 1/4W	
Rg144	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Rg146	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Rg147	R43-6210-25	Carbon 1kΩ ±5% 1/4W	
Rg148	R43-6233-25	Carbon 3.3kΩ ±5% 1/4W	
Rg149	R43-6210-05	Carbon 10Ω ±5% 1/4W	
Rg150	R43-6243-25	Carbon 4.3kΩ ±5% 1/4W	
Rg151,152	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Rg153,154	R43-6222-25	Carbon 2.2kΩ ±5% 1/4W	
Rg155,156	R43-6282-45	Carbon 820kΩ ±5% 1/4W	
Rg157,158	R43-6282-25	Carbon 8.2kΩ ±5% 1/4W	
Sg1	S42-3023-05	Pushbutton switch (3 key)	☆
Sg2	S42-5010-05	Pushbutton switch (5 key)	☆
Sg3	S31-6011-05	Slide switch	☆
Qg1	V09-0124-10	FET 2SK61	
Qg2	V03-0535-10	Transistor 2SC535(A,B)	
Qg3	V03-1342-00	Transistor 2SC1342	
Qg4	V03-1923-00	Transistor 2SC1923	
Qg5	V09-0122-50	FET 2SK68(L,M,N) or FET 2SK117(Y,GR,BL) or FET 2SK105(F,H,J)	
Qg6~8	V03-0345-05	Transistor 2SC828A (Q,R) or Transistor 2SC945 (Q,P)	
Qg9	V01-0170-05	Transistor 2SA733 (Q,P) or Transistor 2SA564A (Q,R,S)	
Qg10	V03-0345-05	Transistor 2SC828A (Q,R) or Transistor 2SC945 (Q,P)	
Qg11,12	V03-0456-05	Transistor 2SC1222 or Transistor 2SC1845 (F,E,U)	
Qg13,14	V09-0122-50	FET 2SK68 (L,M,N) or FET 2SK117 (Y,GR,BL) or FET 2SK105 (F,H,J)	
Qg15,16	V03-0345-05	Transistor 2SC828A (Q,R) or Transistor 2SC945 (Q,P)	
Qg17	V03-0456-05	Transistor 2SC1222 or Transistor 2SC1845 (F,E,U)	
Dg1~7	V11-0076-05	Diode 1S1555 or Diode 1S2076	
ICg1	V30-0133-05	IC HA1137W	
ICg2	V30-0196-05	IC HA1197 or IC LA1240	
ICg3	V30-0245-10	IC LA3350S-L6	
ICg5,6	V30-0264-10	IC HA1457	

## POWER (X07-1650-80)

Ref. No.	Parts No.	Description	Re- marks
Ce1,2	C25-6522-57	Electrolytic 2.2μF 35WV	
Ce3,4	C52-1747-16	Ceramic 470pF ±10%	
Ce5,6	C52-1733-16	Ceramic 330pF ±10%	
Ce7~10	C24-1010-71	Electrolytic 100μF 10WV	
Ce11,12	C71-1722-05	Ceramic 22pF ±5%	
Ce13,14	C71-1715-05	Ceramic 15pF ±5%	
Ce15,16	C24-1010-71	Electrolytic 100μF 10WV	
Ce17,18	C24-1847-61	Electrolytic 47μF 63WV	
Ce19~22	C24-1047-61	Electrolytic 47μF 10WV	
Ce23,24	C46-1768-36	Mylar 0.068μF ±10%	
Ce25	C46-2010-47	Mylar 0.1μF ±20%	
Ce30	C26-1247-67	Electrolytic 47μF 16WV	
Ce31	C25-1247-67	Electrolytic 47μF 16WV	
Ce32	C46-1710-47	Mylar 0.1μF ±20%	
Ce33	C24-1710-51	Electrolytic 1μF 50WV	
Ce34	C24-1022-81	Electrolytic 2200μF 10WV	
Ce35,36	C90-0360-05	Electrolytic 10,000μF 56WV	
Ce37~40	C54-2710-39	Ceramic 0.01μF +100%—0%	
Ce41,42	C24-1210-71	Electrolytic 100μF 16WV	
Ce43	C24-1410-71	Electrolytic 100μF 25WV	
Ce44	C24-1710-51	Electrolytic 1μF 50WV	
Ce45	C24-1422-71	Electrolytic 220μF 25WV	
Ce46	C24-1410-71	Electrolytic 100μF 25WV	
Ce47	C24-1210-71	Electrolytic 100μF 16WV	
Ce48	C91-0023-05	Ceramic 0.01μF AC250WV	
Fe1	F05-5022-05	Fuse (5A) for Pilot lamp	
Fe2	F05-6021-05	Fuse (6A)	
Fe3	F05-3022-05	Fuse (3A)	
—	J13-0041-05	Fuse Clip × 6	
Le1,2	L40-1021-03	Inductor (1mH)	
Le3,4	L39-0080-15	Phase compensation coil	
VRe1,2	R12-0052-05	PC trimming 100Ω(B) Bias	
Re1,2	R43-6210-25	Carbon 1kΩ ±5% 1/4W	
Re3,4	R43-6247-35	Carbon 47kΩ ±5% 1/4W	
Re5,6	R43-6233-15	Carbon 330Ω ±5% 1/4W	
Re7~10	R43-6227-15	Carbon 270Ω ±5% 1/4W	
Re11,12	R43-6239-25	Carbon 3.9kΩ ±5% 1/4W	
Re13~16	R43-6282-15	Carbon 820Ω ±5% 1/4W	
Re17,18	R43-6218-35	Carbon 18kΩ ±5% 1/4W	
Re19,20	R43-6222-35	Carbon 22kΩ ±5% 1/4W	
Re21,22	R43-1212-15	Carbon 120Ω ±5% 1/4W	
Re23,24	R43-6247-05	Carbon 47Ω ±5% 1/4W	
Re25,26	R43-1233-15	Carbon 330Ω ±5% 1/4W	
Re27,28	R43-1256-05	Carbon 56Ω ±5% 1/4W	
Re29~32	R43-1222-15	Carbon 220Ω ±5% 1/4W	
Re33~36	R43-6218-25	Carbon 1.8kΩ ±5% 1/4W	
Re37~40	R43-6227-15	Carbon 270Ω ±5% 1/4W	
Re41~44	R43-6215-35	Carbon 15kΩ ±5% 1/4W	
Re45~48	R92-0113-05	Cement 0.33Ω ±5% 3W	
Re49~52	R43-1247-95	Carbon 4.7Ω ±5% 1/4W	
Re53,54	R47-5647-95	RS 4.7Ω ±5% 3W	
Re55,56	R47-5410-05	RS 10Ω ±5% 1W	
Re60,61	R43-6268-35	Carbon 68kΩ ±5% 1/4W	
Re62	R43-6215-35	Carbon 15kΩ ±5% 1/4W	
Re63	R43-6222-45	Carbon 220kΩ ±5% 1/4W	
Re64	R43-6233-45	Carbon 330kΩ ±5% 1/4W	
Re65,66	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Re67	R43-6282-35	Carbon 82kΩ ±5% 1/4W	
Re68	R43-6212-35	Carbon 12kΩ ±5% 1/4W	
Re69	R43-6210-35	Carbon 10kΩ ±5% 1/4W	

## PARTS LIST

Ref. No.	Parts No.	Description	Re- marks
Re70	R43-6210-25	Carbon 1kΩ ±5% 1/4W	
Re71	R47-5568-15	RS 680Ω ±5% 2W	
Re72	R43-6210-35	Carbon 10kΩ ±5% 1/4W	
Re73	R43-6282-25	Carbon 8.2kΩ ±5% 1/4W	
Re74	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Re75	R43-6227-25	Carbon 2.7kΩ ±5% 1/4W	
Re76	R43-6212-25	Carbon 1.2kΩ ±5% 1/4W	
Re77,78	R47-5510-15	RS 100Ω ±5% 2W	
Re79	R47-5533-15	RS 330Ω ±5% 2W	
Re80	R43-6247-25	Carbon 4.7kΩ ±5% 1/4W	
Re81	R43-6282-25	Carbon 8.2kΩ ±5% 1/4W	
Re82	R43-6218-25	Carbon 1.8kΩ ±5% 1/4W	
Re83	R47-5512-15	RS 120Ω ±5% 2W	
Re84,85	R47-5518-15	RS 180Ω ±5% 2W	
Re86	R47-5533-15	RS 330Ω ±5% 2W	
Re87	R47-5439-25	RS 3.9kΩ ±5% 1W	
Re88	R47-5410-25	RS 1kΩ ±5% 1W	
Se1	S31-2046-05	Slide switch (Voltage selector)	
RLe1	S51-4034-05	Relay	
Qe1~4	V01-0189-05	Transistor 2SA872 (E) or Transistor 2SA921 (S)	
Qe5,6	V01-0198-05	Transistor 2SA872 or Transistor 2SA872A	
Qe7,8	V03-1775-00	Transistor 2SC1775 or Transistor 2SC1775A	
Qe9,10	V03-0451-05	Transistor 2SC1885 (Q,R)	
Qe11,12	V01-0912-20	Transistor 2SA912 (Q,R)	
Qe13,14	V01-0084-05	Transistor 2SA733 (R,Q) or Transistor 2SB725 (Q,R)	
Qe15~18	V03-0270-05	Transistor 2SC945 (R,Q) or Transistor 2SD767 (Q,R)	
Qe19,20	V01-0084-05	Transistor 2SA733 (R,Q) or Transistor 2SB725 (Q,R)	
Qe21,22	V03-0468-05	Transistor 2SC1913 (Q,R)	
Qe23,24	V01-0188-05	Transistor 2SA913 (Q,R)	
Qe25	V03-0270-05	Transistor 2SC945 (R,Q) or Transistor 2SD767 (Q,R)	
Qe26	V01-0084-05	Transistor 2SA733 (R,Q) or Transistor 2SB725 (Q,R)	
Qe27	V03-0270-05	Transistor 2SC945 (R,Q) or Transistor 2SD767 (Q,R)	
Qe28	V03-1775-00	Transistor 2SC1775 or Transistor 2SC1775A	
Qe29	V03-0494-05	Transistor 2SC1509 (Q,R) or Transistor 2SC2274K(E,F)	
Qe30	V04-0330-00	Transistor 2SD330	
Qe31	V03-1775-00	Transistor 2SC1775 or Transistor 2SC1775A	
Qe32,33	V01-0173-05	Transistor 2SA850 or Transistor 2SA777 (Q,R)	
De1,2	V11-5100-10	Varistor STV-4H (W)	
De3~8	V11-0271-05	Diode 1S2076 or Diode 1S2076A	
De9~12	V11-0273-05	Diode 1S2076A	
De13,14	V11-0219-05	Diode V06B	
De15	V11-0273-05	Diode 1S2076A	
De16	V11-2101-40	Diode M4C-51-12*1	
De17	V11-4102-30	Zener Diode XZ-132	
De18	V11-0287-05	Zener Diode WZ-240	



## PARTS LIST

### TONE (X11-1510-80)

Ref. No.	Parts No.	Description	Re- marks
Ci1,2	C24-0822-71	Electrolytic 220 $\mu$ F 6.3WV	
Ci3,4	C24-1010-71	Electrolytic 100 $\mu$ F 10WV	
Ci5,6	C25-1410-67	Electrolytic 10 $\mu$ F 25WV	
Ci7~10	C46-1768-26	Mylar 0.0068 $\mu$ F $\pm$ 10%	
Ci11,12	C46-1739-36	Mylar 0.039 $\mu$ F $\pm$ 10%	
Ci13,14	C46-1733-26	Mylar 0.0033 $\mu$ F $\pm$ 10%	
Ci15,16	C52-1733-16	Ceramic 330pF $\pm$ 10%	
Ci17,18	C25-6522-57	Electrolytic 2.2 $\mu$ F 35WV	
Ci19,20	C24-1010-71	Electrolytic 100 $\mu$ F 10WV	
Ci21,22	C25-1410-67	Electrolytic 10 $\mu$ F 25WV	
Ci23~26	C46-1710-46	Mylar 0.1 $\mu$ F $\pm$ 10%	
Ci27,28	C25-6522-57	Electrolytic 2.2 $\mu$ F 35WV	
Ci29,30	C25-1710-57	Electrolytic 1 $\mu$ F 50WV	
Ci31,32	C24-1010-71	Electrolytic 100 $\mu$ F 10WV	
Ci33,34	C25-1410-67	Electrolytic 10 $\mu$ F 25WV	
Ci35,36	C25-6522-57	Electrolytic 2.2 $\mu$ F 35WV	
Ci37,38	C52-1712-26	Ceramic 0.0012 $\mu$ F $\pm$ 10%	
Ci39,40	C46-1712-46	Mylar 0.12 $\mu$ F $\pm$ 10%	
Ci41,42	C46-1722-36	Mylar 0.022 $\mu$ F $\pm$ 10%	
Ci43,44	C24-1410-71	Electrolytic 100 $\mu$ F 25WV	
Ci45,46	C71-1722-06	Ceramic 22pF $\pm$ 10%	
VRi1	R06-5039-05	Potentiometer 200k $\Omega$ (MN) Dual (Balance)	
VRi2	R08-5039-05	Potentiometer 100k $\Omega$ (B) Dual(Volume)	
VRi3~5	R06-4039-05	Potentiometer 50k $\Omega$ (B) Dual(Tone)	
Ri1,2	R43-6247-05	Carbon 47 $\Omega$ $\pm$ 5% 1/4W	
Ri3,4	R43-6239-15	Carbon 390 $\Omega$ $\pm$ 5% 1/4W	
Ri5,6	R43-6210-35	Carbon 10k $\Omega$ $\pm$ 5% 1/4W	
Ri7,8	R43-6227-25	Carbon 2.7k $\Omega$ $\pm$ 5% 1/4W	
Ri9,10	R43-6212-25	Carbon 1.2k $\Omega$ $\pm$ 5% 1/4W	
Ri11,12	R43-6215-35	Carbon 15k $\Omega$ $\pm$ 5% 1/4W	
Ri13,14	R43-6239-25	Carbon 3.9k $\Omega$ $\pm$ 5% 1/4W	
Ri15,16	R43-6239-35	Carbon 39k $\Omega$ $\pm$ 5% 1/4W	
Ri17,18	R43-6222-15	Carbon 220 $\Omega$ $\pm$ 5% 1/4W	
Ri19~22	R43-6233-25	Carbon 3.3k $\Omega$ $\pm$ 5% 1/4W	
Ri23~26	R43-6227-35	Carbon 27k $\Omega$ $\pm$ 5% 1/4W	
Ri27~30	R43-6230-25	Carbon 3k $\Omega$ $\pm$ 5% 1/4W	
Ri31,32	R43-6268-25	Carbon 6.8k $\Omega$ $\pm$ 5% 1/4W	
Ri33,34	R43-6216-45	Carbon 160k $\Omega$ $\pm$ 5% 1/4W	
Ri35,36	R43-6233-35	Carbon 33k $\Omega$ $\pm$ 5% 1/4W	
Ri37,38	R43-6247-25	Carbon 4.7k $\Omega$ $\pm$ 5% 1/4W	
Ri39,40	R43-6215-25	Carbon 1.5k $\Omega$ $\pm$ 5% 1/4W	
Ri41~44	R43-6243-25	Carbon 4.3k $\Omega$ $\pm$ 5% 1/4W	
Ri45~48	R43-6227-35	Carbon 27k $\Omega$ $\pm$ 5% 1/4W	
Ri49,50	R43-6216-45	Carbon 160k $\Omega$ $\pm$ 5% 1/4W	
Ri51,52	R43-6233-35	Carbon 33k $\Omega$ $\pm$ 5% 1/4W	
Ri53,54	R43-6247-25	Carbon 4.7k $\Omega$ $\pm$ 5% 1/4W	
Ri55,56	R43-6215-25	Carbon 1.5k $\Omega$ $\pm$ 5% 1/4W	
Ri57,58	R43-6239-35	Carbon 39k $\Omega$ $\pm$ 5% 1/4W	
Ri59,60	R43-6247-35	Carbon 47k $\Omega$ $\pm$ 5% 1/4W	
Ri61,62	R43-6218-35	Carbon 18k $\Omega$ $\pm$ 5% 1/4W	
Ri63,64	R43-6210-25	Carbon 1k $\Omega$ $\pm$ 5% 1/4W	
Ri65,66	R43-6233-45	Carbon 330k $\Omega$ $\pm$ 5% 1/4W	
Ri67,68	R43-1233-05	Carbon 33 $\Omega$ $\pm$ 5% 1/4W	
Si1	S33-2034-05	Lever switch (Tone)	
Si2	S42-2022-05	Pushbutton (Filter)	☆
Qi1,2	V09-0092-05	Transistor 2SK68A(L,M)	
Qi3,4	V01-0198-05	Transistor 2SA872 or	
	V01-0992-10	Transistor 2SA992 (F,E)	

Ref. No.	Parts No.	Description	Re- marks
Qi5,6	V03-1775-00	Transistor 2SC1775 or	
	V03-1845-20	Transistor 2SC1845 (F,E,U)	
Qi7~10	V01-0198-05	Transistor 2SA872 or	
	V01-0992-10	Transistor 2SA992 (F,E)	

### SPEAKER SELECTOR (X13-2550-80)

Ref. No.	Parts No.	Description	Re- marks
Ch1,2	C24-1047-61	Electrolytic 47 $\mu$ F 10WV	
Ch3,4	C46-1722-37	Mylar 0.022 $\mu$ F $\pm$ 20%	
Ch5,6	C25-6522-57	Electrolytic 2.2 $\mu$ F 35WV	
—	E20-1206-05	Speaker terminal	☆
VRh1~4	R12-1021-05	PC trimming potentiometer 1k $\Omega$ (B)	
Rh1,2	R43-6239-25	Carbon 3.9k $\Omega$ $\pm$ 5% 1/4W	
Rh3,4	R47-5439-15	RS 390 $\Omega$ $\pm$ 5% 1W	
Rh5,6	R43-6256-15	Carbon 560 $\Omega$ $\pm$ 5% 1/4W	
Rh7,8	R43-6218-25	Carbon 1.8k $\Omega$ $\pm$ 5% 1/4W	
Rh9~11	R40-8368-16	RC 680 $\Omega$ $\pm$ 10% 1/2W	
Rh12,13	R47-5456-15	RS 560 $\Omega$ $\pm$ 5% 1W	
Sh1	S42-3017-05	Pushbutton switch (Meter)	☆
Sh2	S42-3022-05	Pushbutton switch (Speaker)	
Dh1,2	V11-0400-05	Diode 1N34A	
Dh3,4	V11-0423-05	Diode 1N60IFT	
Dh5~10	V11-0051-05	Diode 1N60	
THh1,2	V22-0007-05	Thermistor SDT-20	

### DOLBY (X14-1110-80)

Ref. No.	Parts No.	Description	Re- marks
Cv1,2	C81-1410-57	Tantalum 1 $\mu$ F 25WV	
Cv3,4	C46-1722-35	Mylar 0.022 $\mu$ F $\pm$ 5%	
Cv9~12	C24-1410-61	Electrolytic 10 $\mu$ F 25WV	
Cv13,14	C49-2056-24	Film 0.0056 $\mu$ F $\pm$ 2%	
Cv15,16	C24-1410-61	Electrolytic 10 $\mu$ F 25WV	
Cv17,18	C46-1733-45	Mylar 0.33 $\mu$ F $\pm$ 5%	
Cv19,20	C46-1710-45	Mylar 0.1 $\mu$ F $\pm$ 5%	
Cv21,22	C46-1747-35	Mylar 0.047 $\mu$ F $\pm$ 5%	
Cv23,24	C24-1410-61	Electrolytic 10 $\mu$ F 25WV	
Cv25,26	C49-2047-24	Film 0.0047 $\mu$ F $\pm$ 2%	
Cv27,28	C24-1410-61	Electrolytic 10 $\mu$ F 25WV	
Cv29,30	C24-1222-71	Electrolytic 220 $\mu$ F 16WV	
Cv31,32	C49-2027-34	Film 0.027 $\mu$ F $\pm$ 2%	
Cv33,34	C24-1710-51	Electrolytic 1 $\mu$ F 50WV	
Cv35,36	C24-1410-61	Electrolytic 10 $\mu$ F 25WV	
Cv37	C24-1410-71	Electrolytic 100 $\mu$ F 25WV	
Cv39,40	C52-1733-16	Ceramic 330pF $\pm$ 10%	
VRv1~4	R05-5001-05	Potentiometer 100k $\Omega$ (B) (Dolby)	☆

## PARTS LIST/SEMICONDUCTOR SUBSTITUTIONS

### SEMICONDUCTOR SUBSTITUTIONS

Ref. No.	Parts No.	Description	Re- marks
Rv1,2	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Rv3,4	R43-6247-45	Carbon 470kΩ ±5% 1/4W	
Rv5~8	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Rv9,10	R43-6227-45	Carbon 270kΩ ±5% 1/4W	
Rv11,12	R43-6215-45	Carbon 150kΩ ±5% 1/4W	
Rv13,14	R43-6268-45	Carbon 680kΩ ±5% 1/4W	
Rv15,16	R43-6233-25	Carbon 3.3kΩ ±5% 1/4W	
Rv17,18	R43-6218-15	Carbon 180Ω ±5% 1/4W	
Rv19,20	R43-6212-15	Carbon 120Ω ±5% 1/4W	
Rv21,22	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Rv23,24	R43-6247-35	Carbon 47kΩ ±5% 1/4W	
Rv25,26	R43-6282-45	Carbon 820kΩ ±5% 1/4W	
Rv27,28	R43-6227-25	Carbon 2.7kΩ ±5% 1/4W	
Rv29,30	R43-6210-45	Carbon 100kΩ ±5% 1/4W	
Rv35,36	R43-6210-25	Carbon 1kΩ ±5% 1/4W	
Rv37	R40-8315-16	RC 150Ω ±10% 1/2W	
Sv1	S01-7001-05	Rotary switch (DOLBY MODE)	☆
Sv2	S33-2040-05	Lever switch (TAPE MONITOR)	☆
Qv1,2	V03-0270-05	Transistor 2SC945 (R.Q)	
Dv1,2	V11-0051-05	Diode 1N60	
ICv1,2	V30-0139-05	IC NE545B	

Semiconductor Name	Substitutions
2SA747	2SA747 or $P_c \geq 100W$ , $V_{CE0} \geq 120V$ , $I_c \geq 10A$ , $h_{fe} = 50 \sim 100$ , $f_T = 15 \text{ MHz}$
2SC1116	2SC1116A or $P_c \geq 100W$ , $V_{CE0} \geq 120V$ , $I_c \geq 10A$ , $h_{fe} = 50 \sim 100$ , $f_T = 15 \text{ MHz}$
<b>X05-1570-80</b>	
2SA733(Q,P)	2SA564A(Q,R,S), 2SA561(Y)
2SC535(A,B)	2SC381(O,R), 2SC785(R)
2SC945(Q,P)	2SC828A(Q,R), 2SC734(Y), 2SC1213A(C,D) 2SC1890(D)
2SC1342	2SC785(R), 2SC1923
2SC1845(F,E,U)	2SC1222, 2SC1400
2SC1923	2SC785(R), 2SC381
2SK61	—
2SK117(Y,GR,BL)	2SK68(L,M,N), 2SK68A, 2SK105(F,H,J)
<b>X07-1650-80</b>	
2SA733(R,Q)	2SA539, 2SA561, 2SA564, 2SB725(Q,R)
2SA872	2SA872A
2SA850	2SA777(Q,R)
2SA912(Q,R)	—
2SA913(Q,R)	2SA839, 2SB536
2SA921(S)	2SA872(E)
2SC945(R,Q)	2SD767(Q,R)
2SC1775	2SC1775A
2SC1885(Q,R)	—
2SC1913(Q,R)	2SC381(R), 2SC1669
2SC2274(E,F)	2SC1509
2SD330	—
<b>X11-1510-80</b>	
2SA992(F,E)	2SA872, 2SA872A(E,F)
2SC1845(F,E,U)	2SC1775, 2SC1775A(E,F), 2SC1890(D,E,F) 2SC1890A(D,E,F), 2SC2088, 2SC2089
2SK68A(L,M)	—
<b>X14-1110-80</b>	
2SC945(P,Q)	2SC734(O,Y), 2SC1213A(B,C)

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